

State of Michigan

Department of Technology, Management & Budget

Information, Communications and Technology (ICT) Strategy Technical
Advisory Services

Prepared for:



Deliverable C — Identification of Business,
Services and Technology Opportunities

20 January 2012

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Executive Summary

Executive Summary

Background and Overview

- The State of Michigan partnered with Gartner to ensure alignment of its ICT assets, business model, operations and strategy with current and future needs.
- The purpose of this deliverable is to:
 - Define viable business, services and technology improvement scenarios
 - Identify potential risks and mitigation strategies
 - Analyze improvement scenarios against MI requirements to determine viability
 - Identify shared services opportunities
- In order to define potential improvement scenarios for DTMB, the Gartner team examined environmental factors such as transformation drivers and enablers, DTMB's strategic advantages, and improvement opportunities resulting from understanding the current ICT services.
 - Gartner team leveraged Gartner Research to identify several **transformation drivers** — external societal, technology and industry trends — that will impact DTMB and its customers.
 - Gartner used the information gathered from executive interviews, the Current-State Analysis and the Gap Analysis to identify **transformation enablers** — DTMB strategic and internal improvement opportunities — that will help DTMB to realize its strategic vision.
 - Gartner identified strategic elements that DTMB can use to facilitate achieving the desired goals
- Based on the environmental factors, Gartner identified IT implications to define the capabilities that DTMB must have in order to take advantage of the environment. The scenarios are based on diverging approaches that DTMB may take in order to achieve the selected capabilities.

Executive Summary

Transformation Drivers: Societal Trends and Implications for the State of Michigan

Effective response to these trends...

- Use of the Internet to conduct business transactions is increasing significantly.
- Adoption of mobile devices is expected to continue to increase.
- Business use of social networking is becoming pervasive and persistent in the work environment.
- Multiple mobile computing platforms are the norm.
- Consumer Internet experience will drive expectations for the workplace.
- Individuals will conduct more business using personal devices.

...requires DTMB initiatives that:

- Provide customer, constituent and employee access to government services that leverage the availability of the Internet.
- Provide services that can be deployed to multiple computing platforms.
- Improve agility to respond to a changing technology environment
- Provide solutions that have the “look and feel” of other solutions that have become widely available and consumer-oriented.

Executive Summary

Transformation Drivers: Public-Sector Trends and Implications for the State of Michigan

Effective response to these trends...

- Continued economic pressure and tight budgets at the state levels, local governments and education
- Establishment of multi-jurisdictional government services to provide economies of scale.
- Plan for and integrate key technologies that:
 - Increase public/private partnerships to provide IT services
 - Support seamless socialization
 - Support commoditization and open standards
 - Support an information continuum
 - Support employee centricity
 - Enable confluence of information, operational, and consumer technologies.

...requires DTMB initiatives that enable:

- Effective, multi-layer and multi-jurisdictional governance and service management.
- Effective performance-oriented service management approaches.
- Aggressive deployment of services through the Internet and mobile platform devices for all constituents and audiences.
- Enterprise information management and governance.
- Enterprise technology and operating standards, processes and tools.

Executive Summary

Transformation Drivers: Government- and Program-Specific Trends and Implications for the State of Michigan

Effective response to these trends...

- Aging legacy systems enabling federal program (i.e., MMIS, HHS, etc.) are being replaced, and require significant new capabilities to be sustained by the states.
- Enterprise information management capabilities are being required in all major federal program areas that are run by states — Human Services, Education, Homeland Security (public safety).
- Consumerization trends will continue to drive changes in the way that governmental agencies interact with constituents and the populations being served.
- A broad range of domain-specific technologies may be deployed by programs to achieve their domain-specific needs.

...requires DTMB initiatives that enable:

- Significantly enhanced project and program management and vendor management capabilities to effectively manage the delivery of modern, integrated solutions.
- Enhanced enterprise information management capabilities in DTMB and in program areas and agencies.
- Aggressively driving solutions and DTMB services to more-consumer-friendly platforms for all constituents.
- Enterprise standards that allow for an ever-widening array of domain-specific technologies to be deployed.

Executive Summary

Transformation Drivers: Security Trends and Implications for the State of Michigan

Effective response to these trends...

- Increasing frequency and viciousness of security attacks.
- Robust security requirements for access, storage and transmission of sensitive data become the minimum.
- Increasing drive for transparency, privacy and de-identification.

...requires DTMB initiatives that enable:

- Aggressive approaches required to monitor and secure systems and networks.
- Established ability to rapidly identify and mitigate new security risks.
- Ability to tailor the security mitigation to the vulnerabilities of the asset being protected.
- Established baseline security requirements across all agencies — likely to include key elements of standards such as HIPAA, PCI, etc.
- Enhanced security capabilities to meet the needs of certain government communities or assets.
- Capability to monitor and enforce compliance with standards.

Executive Summary

Transformation Enablers: Strategic Advantage

- State leadership is emphasizing IT as business enabler... and differentiator:
 - Recently elected Governor has a thorough understanding of how IT can lead to significant transformation, and is a sponsor of this transformation initiative.
 - Governor has emphasized transparency and performance management, leading to agency transformation
- All IT functions are already consolidated under DTMB
 - DTMB has centralized all infrastructure services and aggregated all applications activities into a single organization.
 - Most states are currently grappling with how to do this, while the state of Michigan is learning to get the most from this.
- DTMB possesses a technically-proficient staff that has been recognized nationally for its innovative success.
 - From a skills perspective, DTMB seems to have advanced and proficient skills commensurate with or ahead of other public sector organizations.
 - DTMB employees have high skill levels in roles that are not their current job — signaling there is an ability to reassign employees to align better with skills and job role needs.
- Local governments are actively seeking IT cost-effective IT solutions and IT providers
 - Dire economic straits that exist within local governments drive localities to seek options that would save costs and increase their capabilities.

Executive Summary

Gap Analysis Themes

The Gap Analysis identified role-specific gaps that DTMB can address, but a holistic review of these gaps, informed by the findings of Deliverables A–C, reveals several key themes:

- **Improve customer relationship management** — Although the implementation of Information Officers (IO's) is a good initial step for DTMB, the role and responsibilities for customer relationship management must be clearly defined and communicated. Also, DTMB must address its shortage of skilled relationship management staff.
- **Define a service portfolio that communicates business value** — Although DTMB has various service catalogs and provides monthly SLA reports, DTMB must establish a service portfolio that communicates the business value of its services to its customers. In order to define services in terms of business value, DTMB must work with agencies to define the roles and responsibilities of a business analyst.
- **Understand and manage to cost** — Although DTMB's current financial management processes is primarily driven by cost recovery, DTMB must better understand the cost of service delivery and manage its resources accordingly. As DTMB improves its cost estimations and resource management processes, project portfolio management will increase in importance because agency priorities will need to be understood and expectations will need to be managed.
- **Coordinate innovation efforts** — Although DTMB has been recognized nationally for past projects and has established a specific innovation fund, DTMB must clearly establish an innovation owner that will be responsible for understanding business needs and technology trends so that innovative services that provide business value can be continually defined and improved.

Executive Summary

Gap Analysis Themes (continued)

- **Implement end-to-end project management** — Although DTMB has several project management offices (PMOs) and has defined SUITE as a project management methodology, DTMB must formally standardize project management processes and address the need for skilled project managers. The formalization of project management processes will include basic project management functions such as managing scope, schedule and budget, but it must also include project benefits identification, requirements preparation and defined integration points with enterprise architecture, security and procurement.
- **Conduct application portfolio management** — Although DTMB is able to support several different types of applications, there are numerous technology platforms in place today for building applications which should be retired and/or replaced with existing technologies already being used by DTMB. This is evident in the very high-level application support costs found in the Application Benchmark.
- **Optimize procurement and vendor management** — Although procurement is in the same organization as IT, the procurement and vendor management of IT services should be re-examined from a technology and process perspective to drive down contractor costs and ensure that vendors are held to DTMB's quality/delivery standards.

Executive Summary

DTMB Opportunities Summary

- During the Gap Analysis, Gartner identified 48 high level opportunities for DTMB across the nine IT roles explored as part of the project.
- The opportunities were evaluated across two dimensions:
 - **Speed of Benefits Realization:** Relative time required to realize the inherent benefits of the opportunity
 - **Impact:** Relative impact that the opportunity would have on DTMB in terms of delivering high customer value to agencies and other partners, and/or impact that an opportunity would have on DTMB being able to fulfill its strategic objective of being a best in class IT service provider
- Using the above dimensions, the opportunities were evaluated and assigned to one of four planning quadrants that will aid DTMB in prioritizing its efforts going forward:
 - **Top Priorities**—Opportunities that have a shorter estimated time frame for implementation, while also delivering a high improvement impact. These are the opportunities that DTMB should emphasize and act upon immediately.
 - **Quick Wins**—Opportunities that have a shorter estimated time frame for implementation but have a moderate impact as compared to the Top Priorities. Quick wins should also be pursued as soon as possible, but should not interfere with achievement of the Top Priorities.
 - **Key Investments** —Opportunities that have a significant improvement impact, but require a longer implementation time frame as compared to Top Priorities. DTMB should look to begin planning and investing in these opportunities now so that they can be realized subsequent to the Top Priorities.
 - **Future Improvements**—Opportunities that are longer-term in terms of implementation time, while also not offering the highest relative improvement impact. In terms of prioritization, DTMB should focus on these opportunities after implementing other identified opportunities

Executive Summary

DTMB Opportunities Summary

Speed of Benefits Realization	Faster	Quick Wins	Top Priorities
		<ul style="list-style-type: none">■ Position the IO as a strategic partner■ Engage local governments■ Clarify services to customer agencies■ Leverage the tools DTMB already owns■ Institutionalize enterprise-wide reporting tool■ Establish the Solution Architect function■ Reinforce SUITE methodology■ Conduct a comprehensive risk assessment■ Improve communications from EA to stakeholders■ Conduct security training	<ul style="list-style-type: none">■ Address Agency Perception of DTMB's Business Value■ Establish Business Analyst Function■ Standardize Project Status Reporting■ Standardize project management processes■ Establish Agency IT Strategic Planning Processes That Are Separate From the Call for Projects■ Realign EA to report to an executive level function■ Implement Automated IT Operational Tools■ Consolidate IT Service Catalogs■ Measure Customer Satisfaction■ Improve Customer Metrics■ Establish and Communicate Standard Procurement Process■ Enable Procurement Automation
	Slower	Future Improvements	Key Investments
		<ul style="list-style-type: none">■ Explore Different Financial Management Practices■ Operationalize the Strategic Plan■ Become more business architecture driven■ Implement predictive analytics■ Build Enterprise Information Management (EIM) Capability■ Enhance Governance of BI/PM Activities■ Standardize Data Management Processes■ Continue to innovate Enterprise Architecture■ Address Vendor Risk■ Increase Scope of Vulnerability Management■ Incorporate Privacy Management■ Improve IT Process Maturity	<ul style="list-style-type: none">■ Improve Customer Service Satisfaction■ Establish Internal Governance■ Strengthen Application Portfolio Management■ Optimize Resources to enable resource pooling across DTMB■ Align Organizational Reporting and Governance Structure■ Enhance Financial Management■ Increase Skill and Training for Project Management Roles■ Enable Citizen-Centric Government■ Establish Business Analyst Function■ Align EA with Industry Best Practices■ Increase scope of EA coverage■ More closely align purchasing and procurement functions■ Improve Security Operations Center (SOC) Operations■ Enhance Data Security■ Incorporate Privacy Management
		Lower	Higher
Impact			

Executive Summary

Fundamental Change is Required to Transform IT Service Delivery.

- There are many elements in the current environment that provide opportunities for transforming DTMB's ICT services:
 - Societal trends
 - Trends in public-sector and government program areas
 - Security trends
- There are a host of areas for DTMB to improve, based on the Gartner assessment of:
 - CIO: Business Alignment and Effectiveness
 - CIO: Operations Management
 - Applications
 - Program and Portfolio Management
 - Business Intelligence and Performance Management
 - Enterprise Architecture
 - Infrastructure and Operations
 - IT Sourcing and Vendor Management
 - Security and Risk Management

DTMB must radically rethink its IT delivery model to address the gaps identified and leverage the forces of change in the current environment to become the “IT Provider of Choice (not mandate).”

Strategic Advantages provide a strong foundation for the future capabilities.

Executive Summary

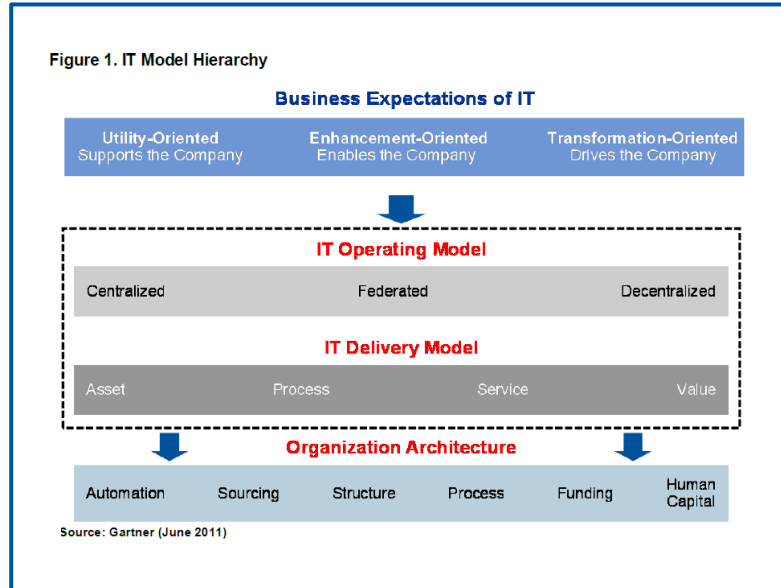
IT Delivery Model Maturity

“Ultimately, the manner in which an IT organization optimizes service management is based on its choice of IT delivery model. IT delivery models are specific organizational constructs aligned to distinct IT service management roles and value propositions. Which one is the right model depends on the enterprise’s expectations of IT in relation to IT’s service delivery capability and maturity.”

*Colleen M. Young
VP and Distinguished Analyst, Gartner Research*

Executive Summary

IT Delivery Model Hierarchy and Overview



- IT operating models are the result of certain implicit governance decisions that define and bind the IT spheres of influence. They help determine:
 - Where responsibility and authority for delivering different types of IT value will reside
 - How the tradeoffs between monopolistic economies of scale and entrepreneurial flexibility will be balanced within the enterprise.
- A delivery model defines the way in which a specific IT organization orchestrates its capabilities to deliver against its core value proposition.
 - Four basic IT Delivery models are Asset-, Process-, Service-, and Value-optimizing models
- The IT organizational architecture describes the way the IT capabilities and resources are orchestrated to deliver expected benefits. The following factors change, depending on the delivery model being followed:
 - Funding mechanisms
 - Organizational structure
 - Process design
 - Strategic sourcing
 - Human capital requirements and management conventions
 - Tools and automation.

Executive Summary

A Note About Shared Services

- The State has expressed a desire to offer selected IT services (i.e., shared services) to other governmental entities, and has established the Center for Shared Solutions to facilitate these efforts.
- Gartner believes that sustained success with these efforts will require substantial change on the part of the State of Michigan, including but not limited to:
 - Demonstrated low-cost, high-quality provisioning of selected IT services
 - Consistent IT service metrics
 - Service level management processes that provide guaranteed provisioning and penalties for non-performance
 - Memoranda of understanding (MOU) or other inter-jurisdictional agreements.
- Offering shared services to other government entities may offer mutual benefits for the State, DTMB and other government entities. It must be part of a larger IT service delivery model strategy in order to avoid potential pitfalls and risks.

Executive Summary



Scenarios Provide Diverging Ways To Achieve Strategic Goals

- The scenarios below describe options for DTMB to pursue to achieve its goal for being preferred provider of IT services
- In the following pages, the advantages and risks associated with these scenarios are used to compare them



Transformation Scenario	High-Level Description
#1: Continue with current IT Service Delivery Model	■ Implement recommended IT initiatives without seeking to explicitly change the overall IT service delivery model
#2: Transition to Service-optimizing, then Value-optimizing IT Delivery Framework	■ Explicitly change to a different IT delivery model by changing some of the underlying aspects – factors which define the IT organization architecture
#3: Radical Cost Reduction — Transition to permanently lower cost IT structure	■ Explicitly seek to significantly reduce IT costs, arriving at a permanently lower cost structure

Executive Summary

Scenario 1: Continue with Current IT Service Delivery Model

Good Potential Fit = 
Limited Potential Fit = 

- Existing IT service delivery model is a combination of Asset-Optimizing and Process-Optimizing approach
- Current IT Service Delivery approach is not viable for longer term alignment with business
 - Enterprise and agency leadership attitudes have matured to expect more value from IT, and expect IT to support and enable business direction
 - It is incompatible with strategic goal to deploy enterprise technologies, such as cloud computing and shared services offerings to other entities

IT Delivery Model	Potential Fit	Potential Impact
Asset Optimizing		<ul style="list-style-type: none">■ Does not position DTMB for improved customer service or business alignment.■ Fully centralized model focuses on strict adherence to standards and off-the-shelf solutions■ Does not enable flexibility to meet agency-specific needs
Process Optimizing		<ul style="list-style-type: none">■ Provides necessary, but not sufficient, movement to improve customer services.■ Lack of collaboration, sharing and reuse continues to position MI as a high cost provider of IT solutions

Executive Summary

Scenario 1: Continue with Current IT Delivery Model — Risk Assessment:



L = Low
M = Medium
H = High

Potential Risk	Impact	Potential Mitigation Strategies
Does not lead to significant improvements in IT service delivery	H	<ul style="list-style-type: none">■ Set expectations with stakeholders for limited IT improvements
Financial benefits not realized	H	<ul style="list-style-type: none">■ Establish baseline business case, and designate an owner for each initiative to ensure that benefits are captured.■ Monitor and track benefits.■ Establish oversight to ensure milestone achievement.■ Ensure risk management program is in place to continuously identify and address risks.■ Engage assistance in contract renegotiation to achieve hard-dollar benefits.
Agency-specific investments will continue, and will increasingly diverge from planned standards	H	<ul style="list-style-type: none">■ Maintain some standardization thru control of procurement and budgeting processes

Executive Summary

Scenario 2: Transition to Service-Optimizing then Value Optimizing Model

- Service– or Value- optimizing service delivery models have underlying characteristics that are consistent with DTMB strategic direction
 - Are consistent with business need for IT to support and enable strategic business direction
 - Enables IT organization to structure funding sources, organization, services, processes, sourcing, and people practices to meet business expectations
- Value-optimizing model is a longer-term goal, and one that cannot be achieved without first adopting a service-optimizing model

IT Delivery Model	Potential Fit	Potential Impact
Service Optimizing		<ul style="list-style-type: none"> ■ Enables DTMB to significantly improve its ability to meet customer needs. ■ Positions DTMB as a cost-effective, high-quality IT provider, even in comparison to external service providers. ■ Enables DTMB to strategically reduce its cost of service.
Value Optimizing		<ul style="list-style-type: none"> ■ Best model to enable DTMB to achieve goal of providing IT services to other governmental entities, but most-challenging to achieve.

Executive Summary

Scenario 2: Transition to Service-Optimizing Then Value Optimizing — Risk Assessment

L = Low
M = Medium
H = High

Potential Risk	Impact	Potential Mitigation Strategies
Radical change creates chaos in DTMB organization	H	<ul style="list-style-type: none"> Start with proof-of-concept efforts, iterative approach. Establish and execute communications plan to provide ongoing information exchange with DTMB employees, agency customers and leadership, and other stakeholders.
High level of resistance from bargaining units to organizational change	H	<ul style="list-style-type: none"> Clearly identify benefits of change, and potential points of resistance. Tailor messages and communications to unionized workers and other affected work groups.
Financial benefits not realized	H	<ul style="list-style-type: none"> Establish baseline business case, and designate an owner for each initiative to ensure that benefits are captured. Monitor and track benefits. Establish oversight to ensure milestone achievement. Ensure risk management program is in place to continuously identify and address risks. Engage assistance in contract renegotiation to achieve hard-dollar benefits.
Leadership change affects priority of transformation program	M	<ul style="list-style-type: none"> Ensure that organization (State of Michigan) sponsorship is in place at all levels. Ensure that the communications plan addresses sponsors as well as DTMB staff. Gain support of agency leadership teams.
Legislation required to implement changes	M	<ul style="list-style-type: none"> If needed, utilize executive orders to legislate significant changes needed.

Executive Summary

Scenario 3: Radical Cost Reduction

- Most popular execution strategies for achieving radical cost reduction are based on asset-optimizing approaches.

Consideration	Potential Impact
Centralization	<ul style="list-style-type: none">■ Centralized IT Management approach is required
Alternative Delivery Models	<ul style="list-style-type: none">■ Cloud computing/SaaS solutions may be needed to jump-start cost saving models■ Outsourcing and off-shoring skills acquisition and consistency of service will be needed
Off-the shelf, standard solutions	<ul style="list-style-type: none">■ Strict adherence to those solutions that provide significant efficiency gains, minimize technical diversity■ Offer only services where the benefits exceed the costs
Governance	<ul style="list-style-type: none">■ Difficult decisions on legacy solutions<ul style="list-style-type: none">– What is “good enough” functionality rather than modified solutions– What systems can be retired?■ Increase maturity of IT demand management practices -- Learn to say “No”
Other factors	<ul style="list-style-type: none">■ Seek and achieve extraordinary staff productivity■ Use automation wherever possible, providing tools to complete work■ Implement agile development techniques■ Focus rigorously on streamlining IT processes, increased process and technology standardization, and continuous improvement approaches

Executive Summary

Scenario 3: Radical Cost Reduction — Risk Assessment

L = Low
M = Medium
H = High

Potential Risk	Impact	Potential Mitigation Strategies
Outsourcing seen as a threat to employees	H	<ul style="list-style-type: none"> Develop and articulate a clear sourcing strategy; communicate widely to the organization Develop contracts that provide limited guarantee of employment to selected employees (e.g. San Diego County)
High level of resistance from bargaining units to organization change	H	<ul style="list-style-type: none"> Clearly identify benefits of change, and potential points of resistance Tailor messages and communications to impacted audiences
Financial benefits not realized	H	<ul style="list-style-type: none"> Establish baseline business case, and designate an owner for each initiative to ensure that benefits are captured Monitor and track benefits Establish oversight to ensure milestone achievement Ensure risk management program is in place to continuously identify and address risks Engage assistance in contract renegotiation to achieve hard dollar benefits
Leadership change affects priority of transformation program	M	<ul style="list-style-type: none"> Ensure that organization (State of MI) sponsorship is in place at all levels Ensure that communications plan addresses sponsors as well as DTMB staff Gain support of agency leadership
Legislation required to implement changes	M	<ul style="list-style-type: none"> If needed, utilize executive orders to legislate significant changes needed to engage
Lack of operational consistency and standards	H	<ul style="list-style-type: none"> Recognize that process and technical standardization must be in place in order for this to be successful Leverage available cloud solutions to provide standard processes and technologies where available

Executive Summary

Scenario 3: Radical Cost Reduction — Risk Assessment (continued)

L = Low
M = Medium
H = High

Potential Risk	Impact	Potential Mitigation Strategies
Historical under-investment in IT leads to further sub-optimal decisions	H	<ul style="list-style-type: none">■ Identify mission-critical services and solution areas that require additional investment■ Identify and implement cost savings approaches that provide funding for mission-critical investment areas
Inability to meet agency-specific demands	H	<ul style="list-style-type: none">■ Expand enterprise architecture function to implement a more proactive role, since many agencies will still have separate funding■ Rely heavily on institutionally combined processes for procurement, budgeting, and IT financial management to help maintain standardization and reduce technical diversity■ Ensure communications plan identifies the benefits for each of the impacted stakeholders.

Executive Summary

Scenario Comparison

- DTMB will have to decide which transformation scenario is most appropriate and this decision will drive the recommendations and road map for the future....

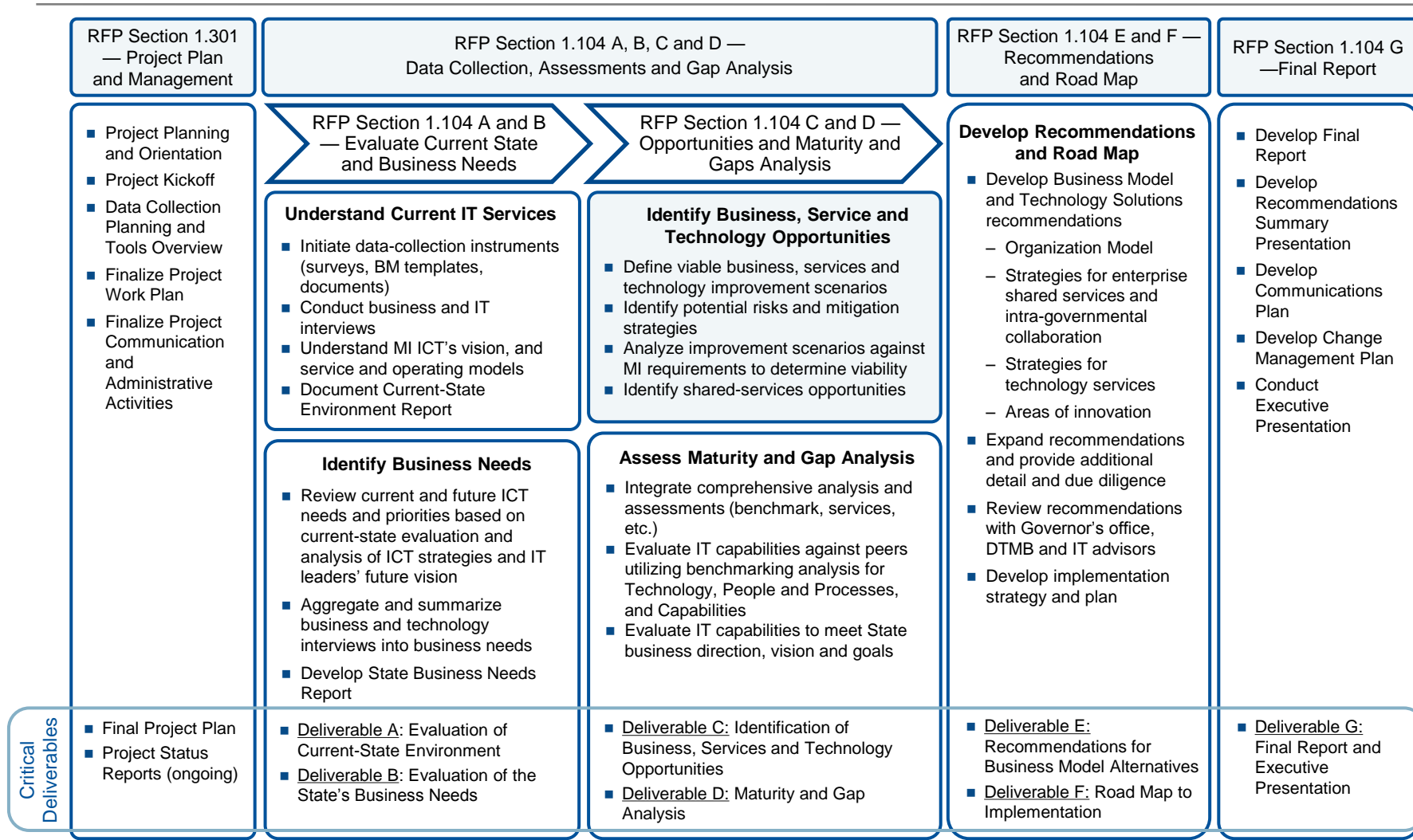
Transformation Scenario	High-Level Description	Comparison
#1: Continue with current IT Service Delivery Model	■ Implement recommended IT initiatives without seeking to explicitly change the overall IT service delivery model	Not Viable
#2: Transition to Service-optimizing, then Value-optimizing IT Delivery Framework	■ Explicitly change to a different IT delivery model by changing some of the underlying aspects – factors which define the IT organization architecture	Viable
#3: Radical Cost Reduction — Transition to permanently lower cost IT structure	■ Explicitly seek to significantly reduce IT costs, arriving at a permanently lower cost structure	Viable

NOTE: The scenarios are numbered, not ranked

Background and Approach

Project Approach

Gartner Methodology — Comprehensive View of State IT Services

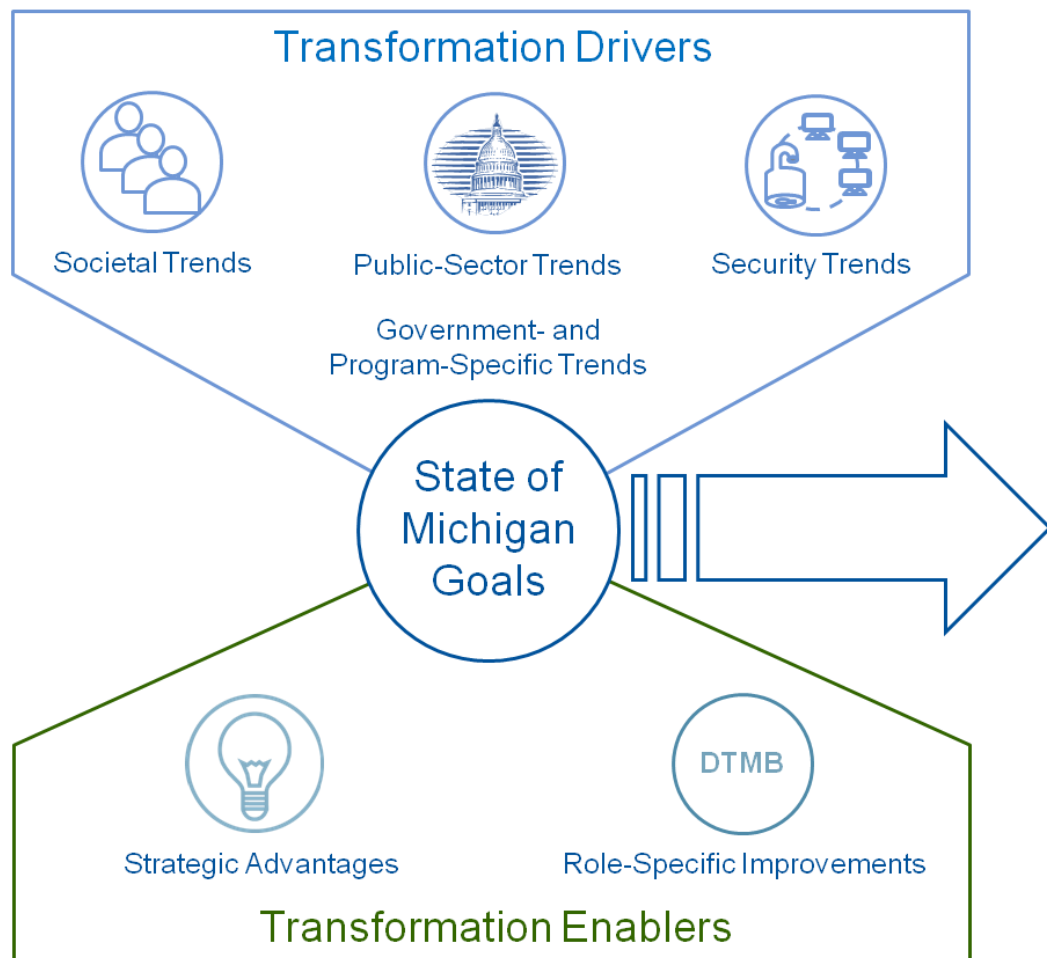


Opportunities Approach

Approach to Identify Business, Services and Technology Opportunities

- In order to define potential improvement scenarios for DTMB, the Gartner team examined environmental factors such as transformation drivers and enablers, DTMB's strategic advantages, and improvement opportunities resulting from understanding the current ICT services.
- Gartner used Gartner Research to identify several **transformation drivers** that will impact DTMB and its customers:
 - External Environment Trends — Current societal and technology trends that will impact DTMB and its customers
 - Government- and Program-Specific Trends — Current trends impacting public-sector organizations that will drive transformation of specific governmental programs or areas.
- Gartner used the information gathered from executive interviews, the Current-State Analysis and the Gap Analysis to identify **transformation enablers** that will help DTMB to realize its strategic vision:
 - Strategic Advantages — Significant strengths that will facilitate DTMB's ability to achieve transformative goals
 - Internal (DTMB-specific) Opportunities — Improvement opportunities identified as part of the ICT assessment which, if addressed, have the potential to enable transformation goals.
- Based on the environmental factors, Gartner identified IT implications to define the capabilities that DTMB must have in order to take advantage of the environment. The scenarios are based on diverging approaches that DTMB may take in order to achieve the selected capabilities.

Opportunities Approach



Strategic Goals will dictate the recommendations that impact:

- Governance
- Operating Model
- Funding
- Technology.

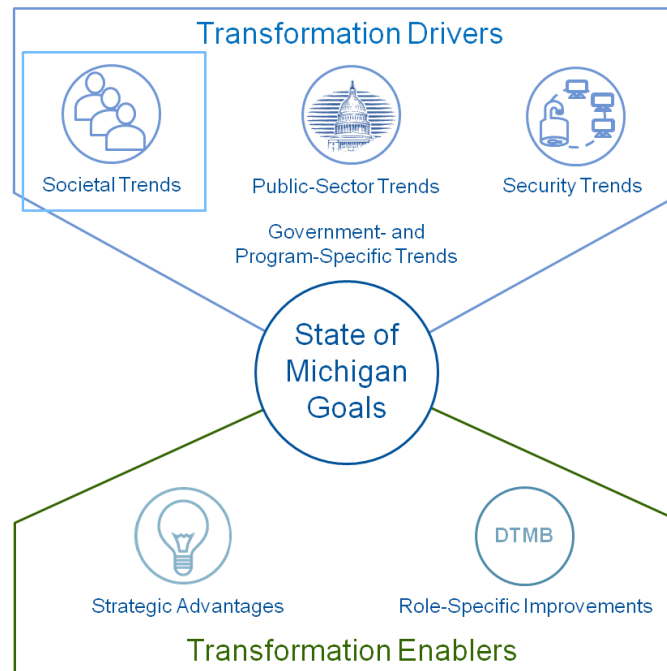
Transformation Drivers

Transformation Drivers

- The following sub-sections provide an overview of external trends that will impact DTMB and its customers. These trends include:
 - Societal Trends
 - Public-Sector Trends
 - Government- and Program-Specific Trends
 - Security Trends

Transformation Drivers

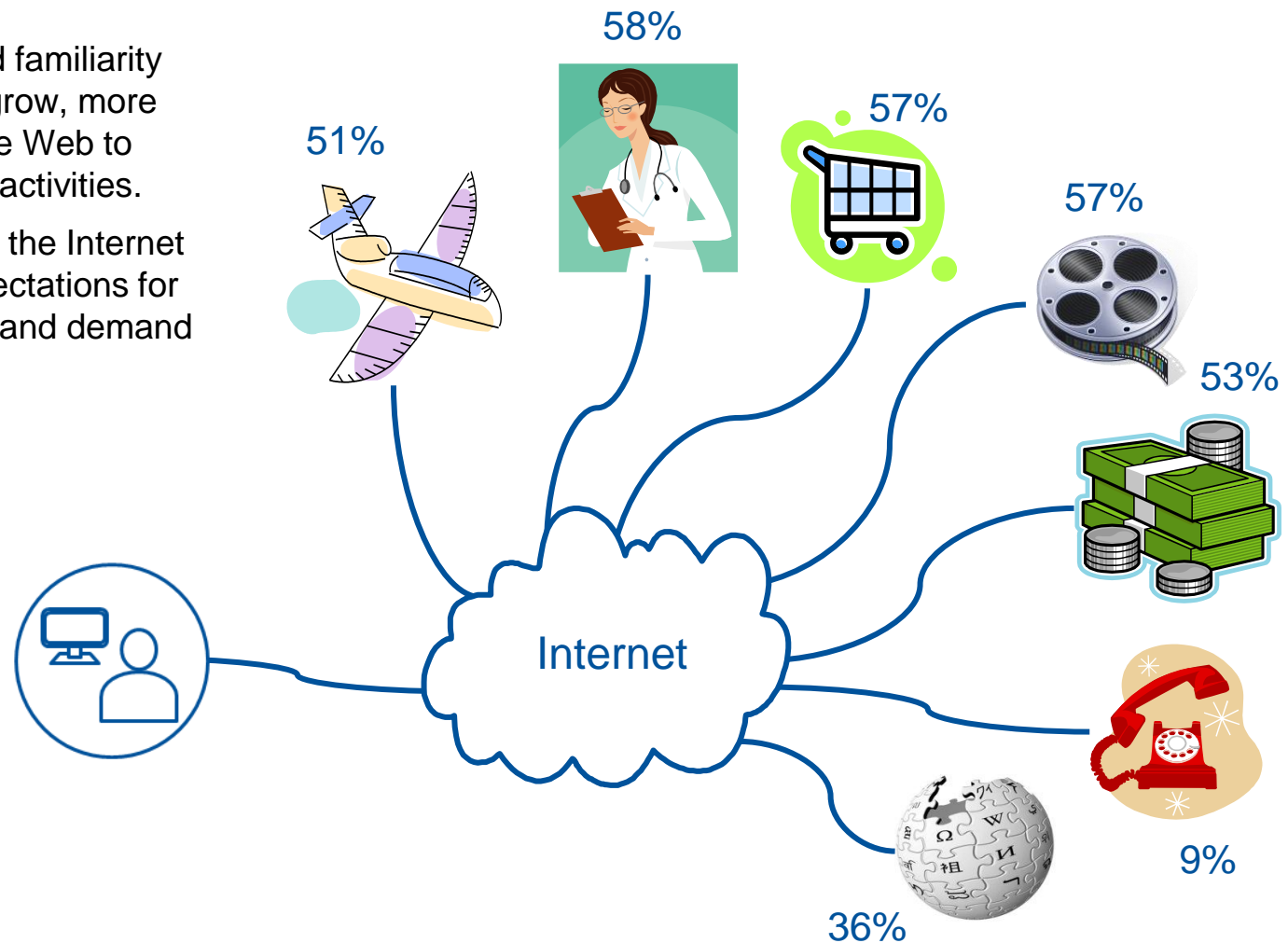
Societal Trends



Transformation Drivers — Societal Trends

The Web is the primary way most people will expect to conduct business transactions.

- As availability and familiarity with the Internet grow, more people will use the Web to handle their daily activities.
- Frequent users of the Internet develop high expectations for service offerings, and demand user-friendliness.

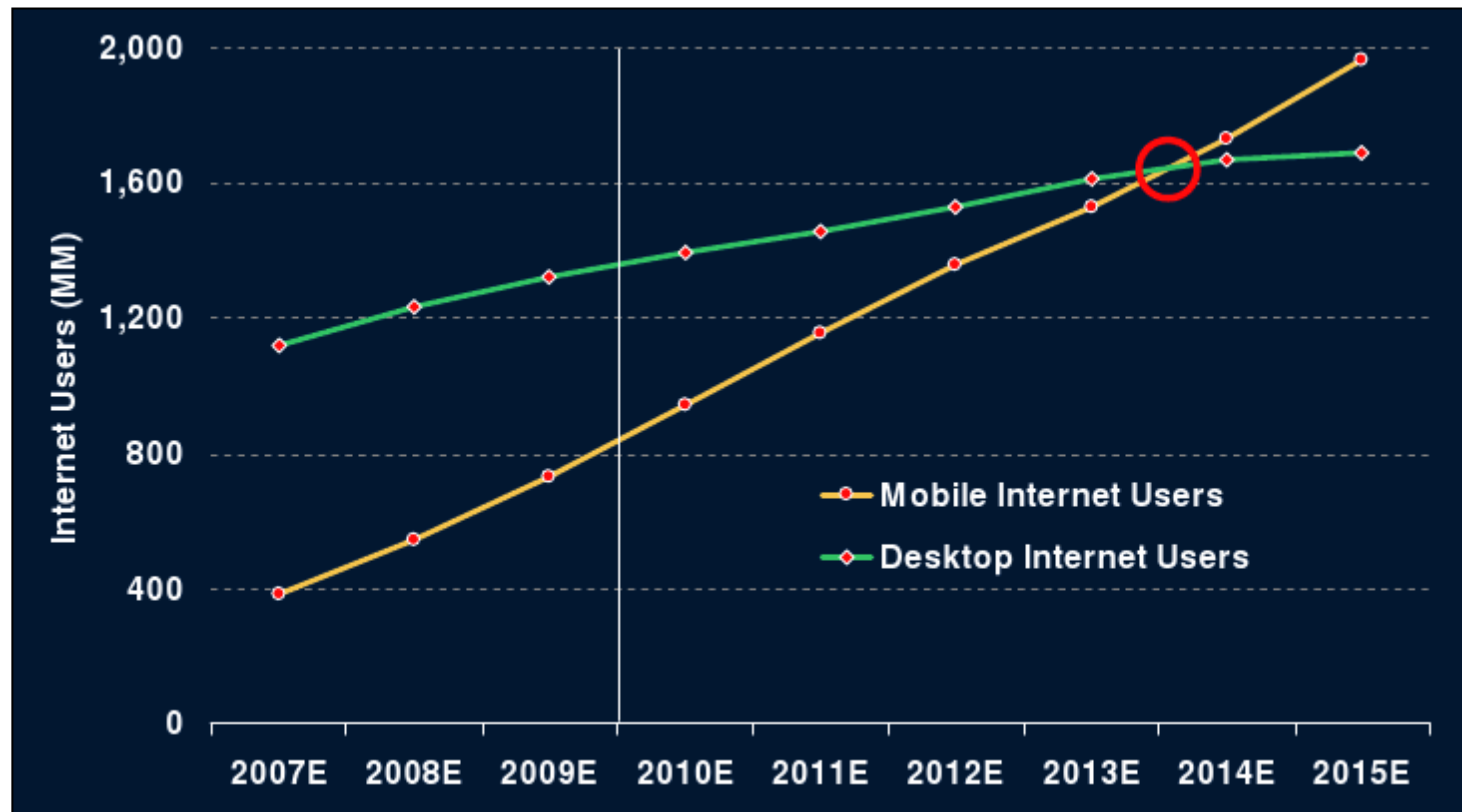


Transformation Drivers — Societal Trends

Mobile adoption is expected to steadily increase, surpassing desktop Internet in 2014.

Mobile Users vs. PC Users

Worldwide Mobile Internet Users > Desktop Internet Users by 2014

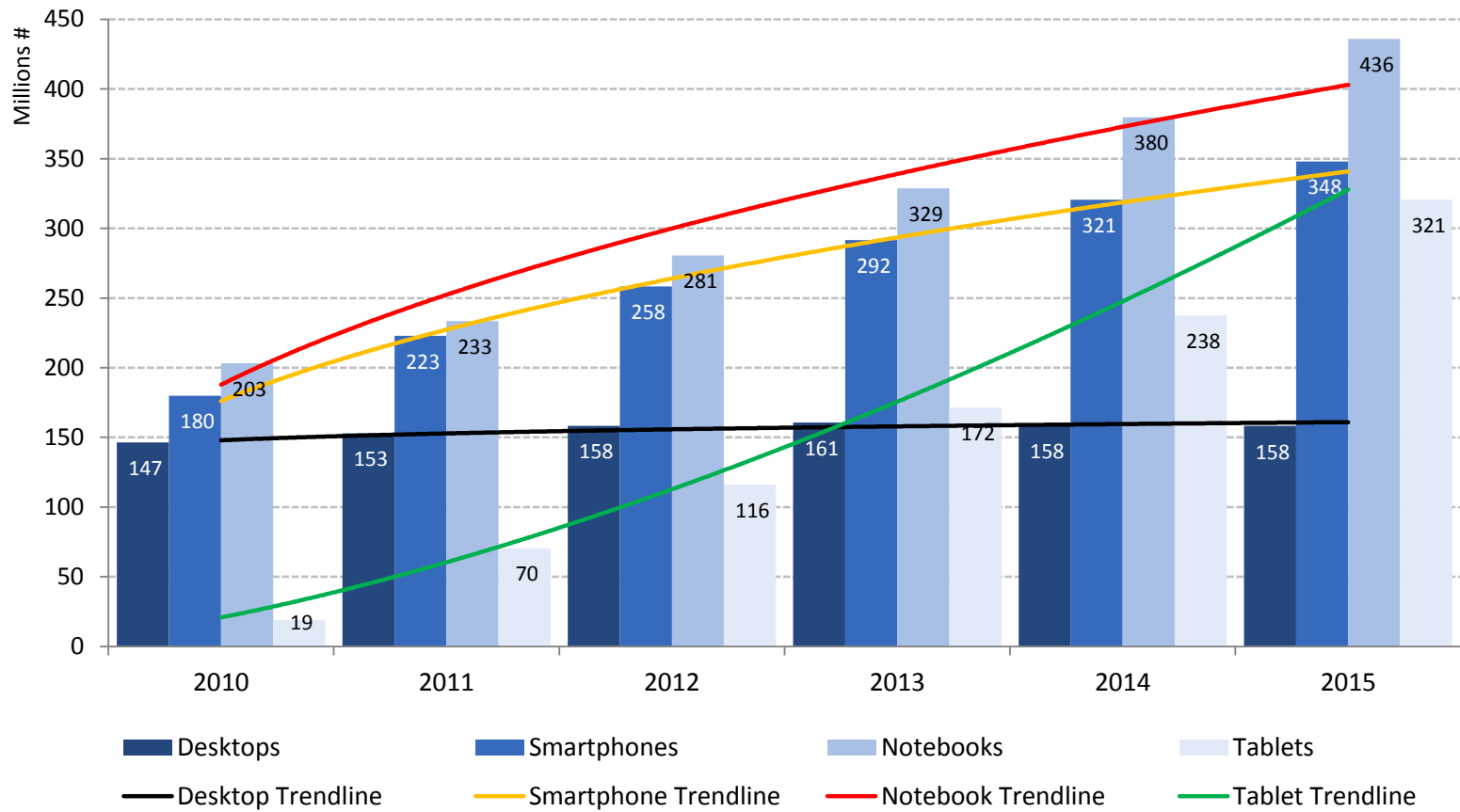


Transformation Drivers — Societal Trends

The tablet market is likewise expected to experience steady adoption growth, increasing by \$300M.

Gartner Device Forecast

Device Shipments and Trendlines

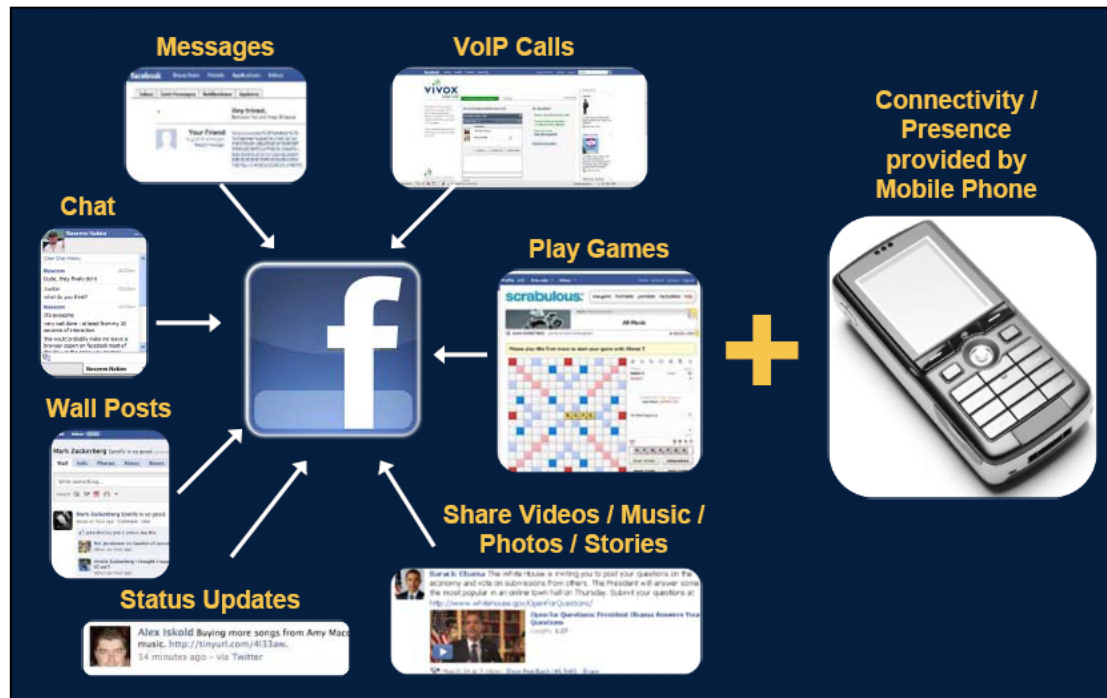


Transformation Drivers — Societal Trends

The growth in mobile and tablet devices means a growing number of connections/networks in individuals' personal lives...

Social Networking Is Here to Stay

Symbiosis of Social and Mobile



■ Highlights

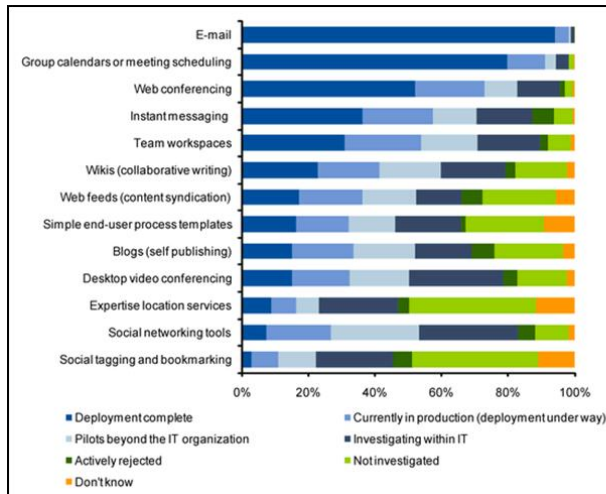
- Facebook (i.e., social networking) = rising share of communications
- Mobile = connectivity/presence
- Social + Mobile = unified communication and multimedia content creation/ consumption tool
 - In the pocket
 - Always on: mobile data traffic to grow 4,000% by 2014 (100+% CAGR)

Source: Morgan Stanley

Transformation Drivers — Societal Trends

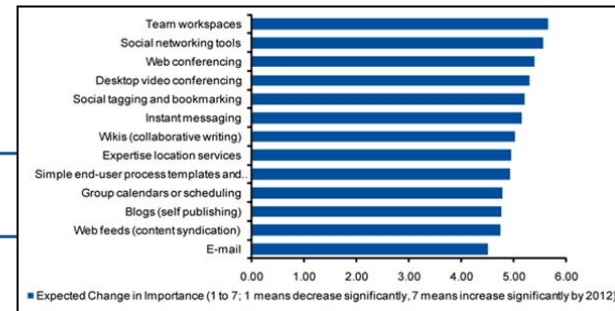
...and in individuals' professional lives, although the uptake is slower.

Business Use of Social Networking Services



Current Level of Technology Adoption

Expected Change in Delivery of Value (skews toward social)



- Business use of social networking services lags the consumer market.
 - By 2015 it is expected that 40% of large enterprises will maintain a corporate “Facebook” for circulating both business and personal data.
- Business social inroads/innovation is becoming pervasive and persistent in the work environment as a key business enabler.



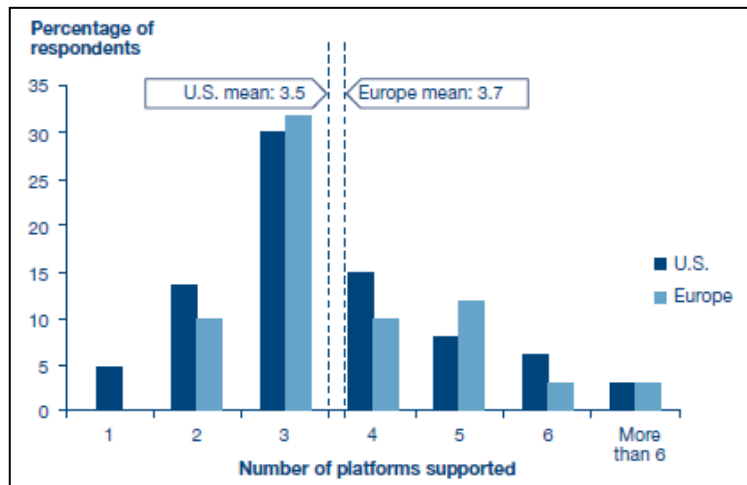
Example: Salesforce.com, bringing cloud and social to business

Transformation Drivers — Societal Trends

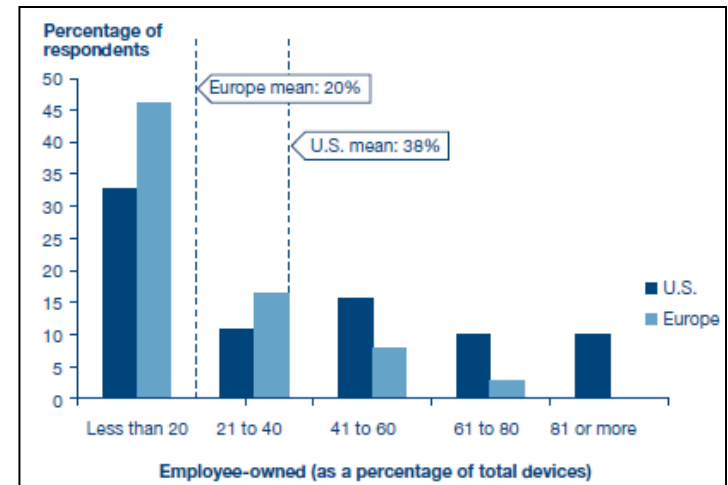
CIOs expect to support multiple mobile platforms, many of which will be employee-owned.

Multiple Mobile Platforms Are the Norm

Smartphone and Tablet Platforms in the **Business** by 2012



Proportion of Employee-Owned Mobile (notebook, tablet, smartphone) Devices by 2012



Surveyed 1,557 mobile phone users across China, India, Italy, Japan, UK & U.S.

- CIOs expect a future of substantial diversity in mobile devices and platforms, and many plan to introduce new devices and management models (e.g., employee-owned IT).
- U.S. and European firms, on average, are expecting to support three or more mobile platforms.

- The average expectation for employee Smartphone/tablet ownership through 2012 is 38% in the U.S. and 20% in Europe.

Source: Gartner

Transformation Drivers — Societal Trends

Information about individuals will not be limited to that stored in government-owned systems.

Identity Information

- Who you are
- Your calendar

Environment Information

- Where you are
- Which device you are using

Process Information

- Things you do or have done
- What you will allow

Community Information

- Who is in your networks?
- Whom do you communicate with?

Note: Company logos are used here to provide examples of organizations whose product or service offering are easily recognized examples of social media and the consumer Internet experience. This page is strictly for internal use only, and should not be posted for external display.



Transformation Drivers — Societal Trends

The consumer Internet experience will drive expectations for the workplace.

- The workforce of the future expects enterprise IT to be no different from their personal digital world.

- Access to the Internet is a standard workplace requirement.
- Email and IM become standard communication tools.
- Discussion forums, wikis and blogs become collaboration tools.
- Access to employee information through Web-based tools is expected.
- Web-enabled training tools including video and other media-rich components replace in-person training sessions.
- Procurement is expected to be as easy as ordering shopping on Amazon.com and eBay.
- Mobile devices and applications will enable mobile workforces.
- Social media will allow enterprises to monitor real-time feedback on products and services.

Note: Company logos are used here to provide examples of organizations whose product or service offering are easily recognized examples of social media and the consumer Internet experience. This page is strictly for internal use only, and should not be posted for external display.

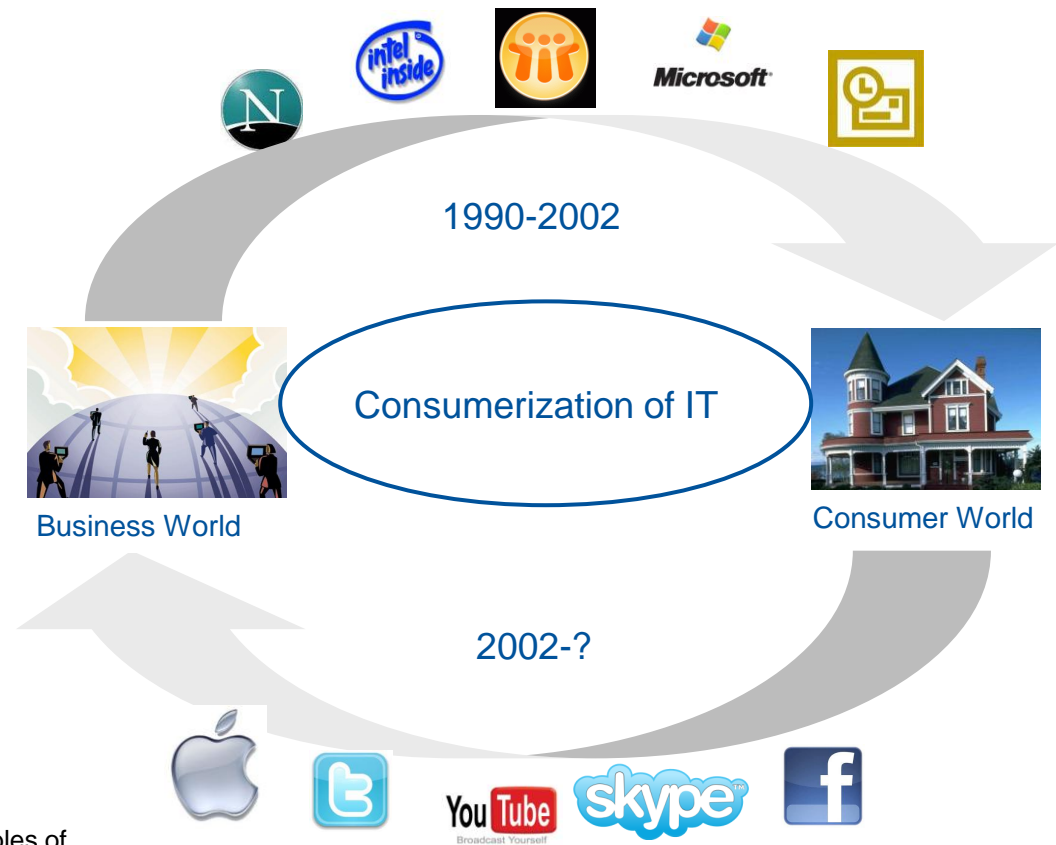


Transformation Drivers — Societal Trends

The consumer Internet experience will drive expectations for the workplace. (continued)

- 1990–2002 was defined by more-passive forms of technology that were dominant in individuals' professional lives.
- Since 2002 the trend has been toward more-active and collaborative forms of IT that have an increasingly dominant role in the consumer sphere.
- As IT has become more prevalent in consumers' private lives, it has shifted expectations of the role of technology in the workplace.
- Employees have come to expect an increasingly social and mobile work environment.

Note: Company logos are used here to provide examples of organizations whose product or service offering are easily recognized examples of social media and the consumer Internet experience. This page is strictly for internal use only, and should not be posted for external display.



Transformation Drivers — Societal Trends

The consumerization of IT will see employees conducting business with personal devices.

- The workforce of the future expects enterprise IT to be no different from their personal digital world.
- Thirty-seven% of U.S. info workers are solving customer and business problems using technology they master first at home, and then bring to work.
- Enterprise users are consumers first — they are increasingly leveraging consumer devices to conduct their work.
- Most of the time, consumers do not realize the challenges behind privacy...theft, security, privacy, compliance and intellectual property protection [are] business risks.
- Gartner has seen an industry trend of increasing numbers of iPads stolen, tablets stolen, laptops stolen — with no encryption on them.
- This means headaches such as:
 - Unknown patch states
 - Unknown application vendors
 - Unknown app compatibility
 - Corporate data access complexity
 - Different management requirements for each device.
- Microsoft says the future of one of its make-or-break products, Windows Phone 7, rests on its ability to win over consumers and have them take the devices to work en masse through the proverbial “back door.”

Sources:

1. Gartner; 2. ZDnet.com, “The Consumerization of IT: Is Resistance Futile?”, May 25, 2011
3. Informationweek.com, “Consumerization Of IT Is No Fad,” June 17, 2011

Transformation Drivers — Societal Trends

Implications for the State of Michigan

Effective response to these trends...

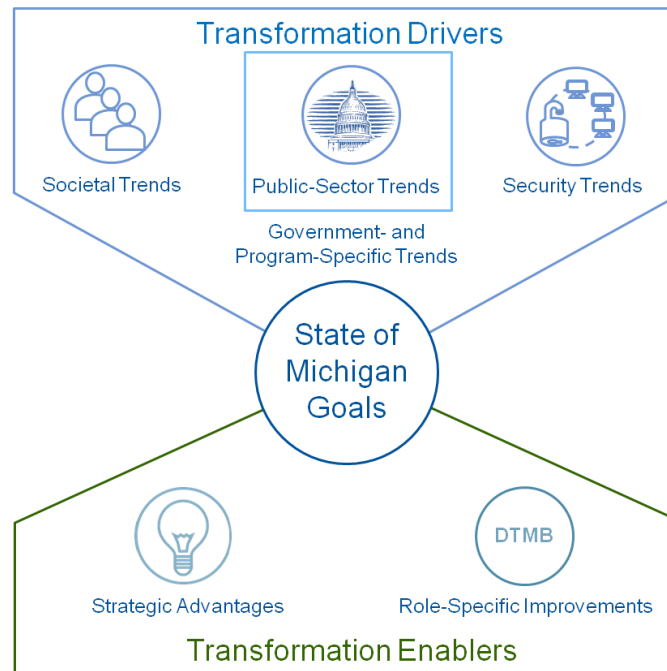
- Use of the Internet to conduct business transactions is increasing significantly.
- Adoption of mobile devices is expected to continue to increase.
- Business use of social networking is becoming pervasive and persistent in the work environment.
- Multiple mobile computing platforms are the norm.
- Consumer Internet experience will drive expectations for the workplace.
- Individuals will conduct more business using personal devices.

...requires DTMB initiatives that:

- Provide customer, constituent and employee access to government services that leverage the availability of the Internet.
- Provide services that can be deployed to multiple computing platforms.
- Improve agility to respond to a changing technology environment
- Provide solutions that have the “look and feel” of other solutions that have become widely available and consumer-oriented.

Transformation Drivers

Public-Sector Trends



Transformation Drivers — Public-Sector Trends

While overall financial conditions of states have improved, they are not back to pre-recession levels.

- General fund spending by states is rising, but remains below FY 2008 levels.
 - Eighteen states enacted net decreases in taxes — five more than those that increased taxes.
 - Midyear budget cuts were much lower in 2011 — down to 19 states and \$7.4B in cuts, from 43 states with \$31.3B in cuts in 2009.
- Spending on Medicaid is expected to consume an increasing share of state budgets, and grow more rapidly than state revenue.
- State balance levels are improving — state balances as a percentage of General Fund expenditures are up to 6.2%, from 4.6% in 2009.
- Temporary funds disbursed to states by the federal government have dropped dramatically.

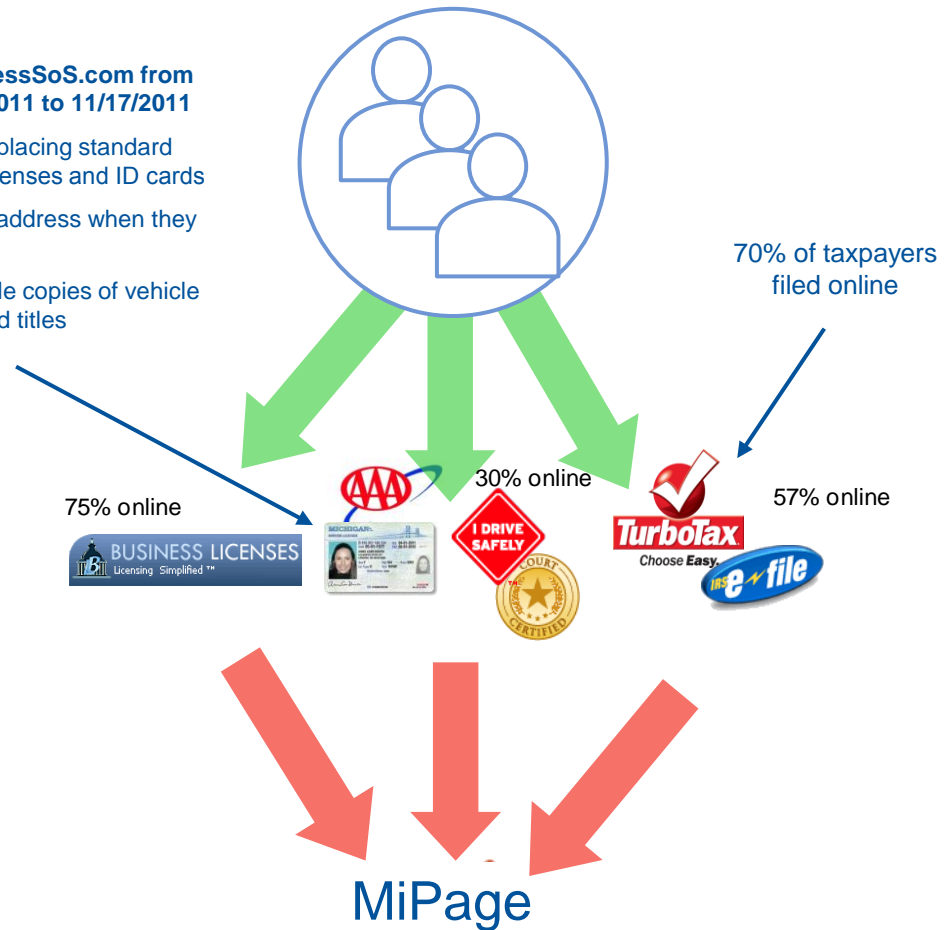
Transformation Drivers — Public-Sector Trends

By 2015, most G2C and G2B interactions will be Web-enabled.

- E-government transactions will experience order-of-magnitude increases in the next five years.
- E-government services will increasingly require integration across government programs and jurisdictions.
- Third-party vendors will increasingly facilitate interaction with government on behalf of constituents.

250,000 on ExpressSoS.com from launch on 9/22/2011 to 11/17/2011

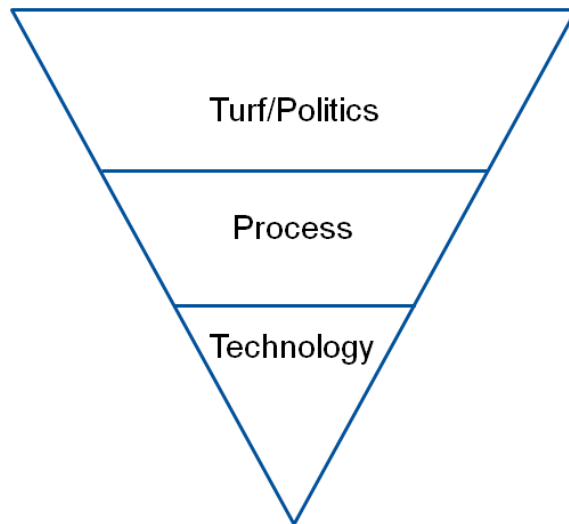
- Renewing or replacing standard state driver's licenses and ID cards
- Changing their address when they move
- Ordering multiple copies of vehicle registrations and titles



Transformation Drivers — Public-Sector Trends

Requirements to deliver integrated services to citizens are driving the need for a common infrastructure and shared technology services.

Difficult



Easy

■ Major Obstacles:

- Technology challenges, in general, pale in comparison with organizational and process difficulties.
- Political competition for power and desire for “local control” impedes cooperation between different levels of government.
- Processes such as procurement are slow and inflexible.
- Funding rules are narrowly defined and do not encourage integration.
- Applications are often designed to encompass unique or conflicting rules of different parts of the organization.

Transformation Drivers — Public-Sector Trends

Governments are increasingly turning to external entities in order to deliver “non-core” government functions, such as IT infrastructure.

Factors Affecting Sourcing Decisions

- Drivers for public/private partnerships (managed services and outsourcing):
 - Need for reasonable and predictable costs
 - Scarcity of skilled resources
 - Refresh of technologies over time
 - Magnitude of effort/skills required to deliver major services.
- Barriers to public/private partnerships:
 - Organizational resistance
 - Absence of enterprise governance and controls
 - Procurement overhead and inflexibility
 - Union resistance (in some states)
 - Difficulty negotiating SLAs.

Public Sector Sourcing Examples*

- Florida
- Virginia
- Arizona
- Navy/Marines
- DISA
- Los Angeles and San Diego Counties
- Alabama
- Georgia
- Ohio

* Plus approximately 25% of Fortune 500 companies

Transformation Drivers — Public-Sector Trends

Gartner Research has identified five key technology trends for governments to increase public value from IT.

- **Key Trend 1 — Technologies/Practices Supporting Seamless Socialization:** Technologies that contribute most directly to open government are *open government data* to support transparency, the establishment of *external communities for government* to support participation and collaboration, and engagement with *consumer social networks* (outside of government) to develop stronger relationships with constituents and to empower employees to access these social networks in the context of their work.
- **Key Trend 2 — Technologies Supporting Commoditization (and Open Standards):** The trend toward standardizing and consolidating government assets and processes has long been important. Examples include emphasizing open standards to enable interoperability and reuse, growing use of *government shared services* (for economies of scale), *business process utilities*, and the increasing adoption of *government domain-specific commercial off-the-shelf (COTS) applications* in areas such as tax and revenue, grant management and human services. *Open-source, public-sector vertical applications* are another example of technology supporting commoditization, first in the educational domain and now in the local government market.
- **Key Trend 3 — Technologies Supporting an Information Continuum:** The need for better and more-effective information governance becomes even greater as the concept of information evolves from information that is collected and managed by government or licensed intermediaries and providers to also encompass information that is collected, rated and managed by communities of individuals. The nature of *enterprise information management programs* will evolve to encompass multiple information sources and new ways to ensure and manage information.

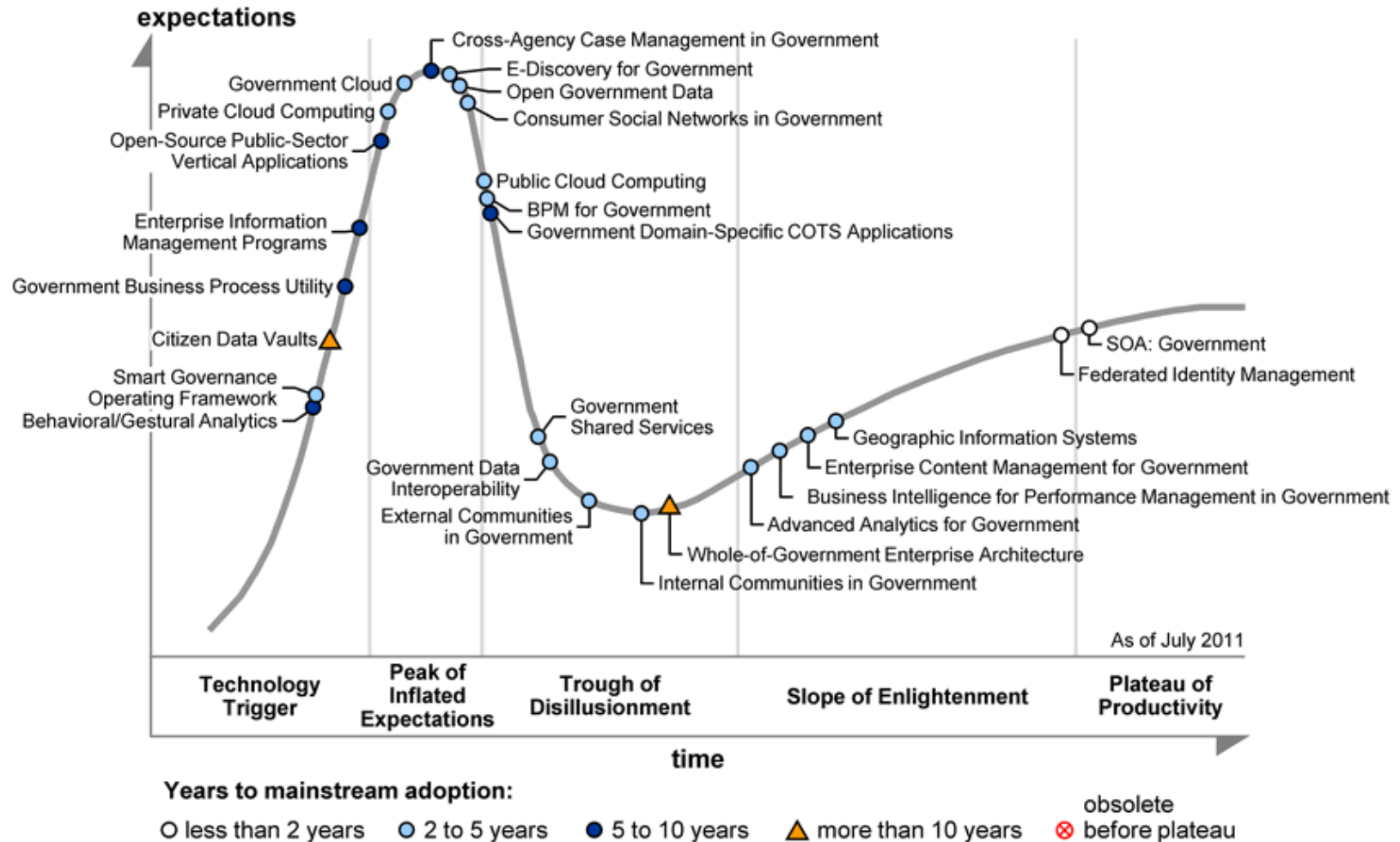
Transformation Drivers — Public-Sector Trends

Gartner Research has identified five key technology trends for governments to increase public value from IT. (continued)

- **Key Trend 4 — Technologies Supporting Employee-Centricity:** The way for governments to leverage social media technologies to produce value is by empowering their employees. The next wave of transformation will have to focus on employees and how to empower them to become the main agents of transformation and innovation. Relatively mature tools supporting *internal communities* or *cross-agency case management* will evolve for use across agencies, domains, and even *external communities* and constituencies. Participating in consumer social networks and internal communities will help give employees the knowledge and connections they need to solve problems in new ways, while improving job performance and increasing personal satisfaction. At the same time, employee empowerment must be encouraged by organizational acceptance that it tangibly contributes to improved results relative to mission attainment.
- **Key Trend 5 — Confluence of Information, Operational and Consumer Technologies:** Government 2.0 and cloud computing are the key technology trends that are gaining political and executive leadership's interest and will influence government transformation in the near future. In this context, we see the concept of "smart jurisdiction" (and *smart governance operational frameworks*) now starting to emerge as a consequence of the confluence of commoditization, socialization, consumerization and the massive increase in the number of IP-enabled devices that operate or monitor key physical infrastructures — such as the electricity grid, water networks, roads and railroads. Tighter integration between planning, performance management and operational systems will become increasingly important for government organizations, especially at the local and state levels, as they aim for financial and environmental sustainability, or increased security via *behavioral/gestural analytics* in surveillance systems.

Transformation Drivers — Public-Sector Trends

Government Hype Cycle for Technology



Transformation Drivers — Public-Sector Trends

Gartner Hype Cycle Technology Timeline

	Less Than Two Years	Two to Five Years	Five to 10 Years	More Than 10 Years
Transformational	<ul style="list-style-type: none"> ■ SOA: Government 	<ul style="list-style-type: none"> ■ Consumer social networks in government ■ Public cloud computing ■ Smart governance operating framework 	<ul style="list-style-type: none"> ■ Enterprise information management programs 	<ul style="list-style-type: none"> ■ Citizen data vaults
High		<ul style="list-style-type: none"> ■ Advanced analytics for government ■ BPM for government ■ Business Intelligence for performance management in government ■ E-discovery ■ Geographic information systems ■ Government cloud ■ Data interoperability ■ Shared services ■ Internal communities ■ Open government data ■ Private cloud communities 	<ul style="list-style-type: none"> ■ Cross-agency case management ■ Domain-specific COTS applications 	<ul style="list-style-type: none"> ■ Whole-of-government Enterprise Architecture

DTMB should be very aware of the transformational and high impact technologies that are projected to mature in less than 5 years

Transformation Drivers — Public-Sector Trends (Continued)

Gartner Hype Cycle Technology Timeline

	Less Than Two Years	Two to Five Years	Five to 10 Years	More Than 10 Years
Moderate	<ul style="list-style-type: none"> Federated Identity Management 	<ul style="list-style-type: none"> Enterprise content management External communities in government 	<ul style="list-style-type: none"> Behavioral/gestural analytics Government business process utility Open-source public-sector vertical applications 	

Low

Transformation Drivers — Public-Sector Trends

Implications for the State of Michigan

Effective response to these trends...

- Continued economic pressure and tight budgets at the state levels.
- Establishment multi-jurisdictional government services to provide economies of scale.
- Plan for and integrate key technologies that:
 - Increase public/private partnerships to provide IT services
 - Support seamless socialization
 - Support commoditization and open standards
 - Support an information continuum
 - Support employee centricity
 - Enable confluence of information, operational and consumer technologies.

...requires DTMB initiatives that enable:

- Effective, multi-layer and multi-jurisdictional governance and service management.
- Effective performance-oriented service management approaches.
- Aggressive deployment of services through the Internet and mobile platform devices for all constituents and audiences.
- Enterprise information management and governance.
- Enterprise technology and operating standards, processes and tools

Transformation Drivers

Program-Specific Trends

Transformation Drivers — Program-Specific Trends

Emerging Trends Impacting HHS

Traditional IT Focus	Emerging Trends for IT Focus
Program-Specific Support	Enterprise and Cross-Program Views and Support
Cost Reduction	Financial and Programmatic Performance, Trends and Benefits
Support Existing Workflows — Status Quo	Support Redesign of Workflows and Integration of Efforts — Re-engineering and Collaboration
Maintenance, Control and Compliance — Tactical	Agility, Innovation and Responsiveness — Strategic
Data Entry, Repository and Reporting	Case Management and Decision Support, and Business Intelligence and Advanced Analytics for Decision Anticipation, Support and Validation

Benefits of Technology Transformation:

- Seamless flow of processes and information across the enterprise and with trading partners
- Enhances the quality and usefulness of health and human services data and information
- Ensures security, accuracy and timeliness of data and information
- Enables advanced analytics and predictive modeling
- Strengthens the continuity and congruency of program initiatives and services
- Improves outcomes of programs and services
- Enhances the agility of the agency in anticipating, predicting and responding to changing demands
- Minimizes duplication of efforts and expenditures
- Strengthens cost predictability, achievement of savings and quantifiable return on investment (ROI).

Transformation Drivers — Program-Specific Trends

States are being flooded with federal legislative changes in healthcare reform, Medicaid and Healthcare Information Exchange (HIE).

ICD-10

ICD -10, What Is Fundamentally Different?

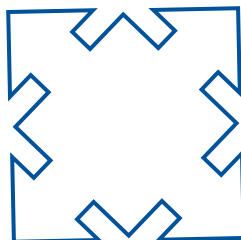


- ICD-10: The broadest scope of any ICD revision
- Expanded from five digits to seven digits
- Includes alphanumeric codes (Digits: 0-9; Letters: A-H, J-N and P-Z)
- Restructuring certain chapters/categories
- Expansion of detail (2,033 categories; 855 more than ICD-9)

Business challenges are created beyond the insurance enterprise

- Purchasers will expect a consistent view of historical and forecast data trends.
- Underwriting and rating will be dramatically affected.
- Incurred but not reported (IBNR) will be nearly impossible to calculate.
- Regulatory reporting at the state and federal levels will not be comparable across ICD-9 to ICD-10 periods.

Gartner



State Medicaid HIT Plan

DEPARTMENT OF HEALTH & HUMAN SERVICES
Centers for Medicare & Medicaid Services
Room 302-C
200 Independence Avenue, SW
Washington, DC 20201
Office of External Affairs & Beneficiary Services



FOR IMMEDIATE RELEASE
July 13, 2010

Contact: CMS Office Media Affairs
(202) 690-6145

Secretary Sebelius Announces Final Rule To Support "Meaningful Use" of Electronic Health Records

WASHINGTON—U.S. Department of Health and Human Services Secretary Kathleen Sebelius today announced final rules to help improve Americans' health, increase safety and reduce health care costs through expanded use of electronic health records (EHR).

"For years, health policy leaders on both sides of the aisle have urged adoption of electronic health records. Beginning on health care reform to improve quality of care and ultimately lower costs," Secretary Sebelius said. "Today, with the leadership of the President and the Congress, we are making that goal a reality."

Under the Health Information Technology for Economic and Clinical Health (HITECH) Act of 2009, eligible health care professionals and hospitals can qualify for Medicare and Medicaid incentive payments when they adopt certified EHR technology and use it to achieve specified objectives. One of the two regulations announced today defines the "meaningful use" objectives that providers must meet to qualify for the bonus payments, and the other regulation identifies the technical capabilities required for certified EHR technology.

Announcement of today's regulations marks the completion of multiple steps laying the groundwork for the incentive payments program. With "meaningful use" regulations in place, EHR usage increases can ensure that those systems deliver the expected advantages, providers can be assured that the systems they acquire will support achievement of "meaningful use" objectives, and a concentrated five-year national initiative to adopt and use electronic records in health care can begin.

"This is a turning point for electronic health records in America, and for improved quality and effectiveness in health care," said David E. Kohn, M.D., National Coordinator for Health Information Technology. "In adhering to the goals that Congress called for, we have sought to provide the leadership and coordination that are essential for a large, technology-based enterprise. At the same time, we have sought and received extensive input from the health care community, and we have drawn on their experience and wisdom to produce regulations that are both ambitious and achievable."

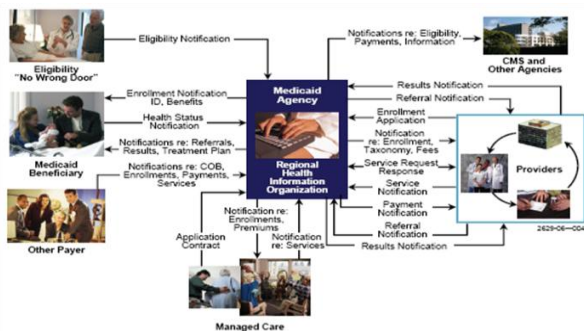
Two companion final rules were announced today. One regulation, issued by the Centers for Medicare & Medicaid Services (CMS), defines the minimum requirements that providers must meet through their use of certified EHR technology in order to qualify for the payments. The other rule, issued by the Office of the National Coordinator for Health Information Technology (ONC), identifies the standards and certification criteria for the certification of EHR technology, so eligible providers and hospitals may be assured that the systems they adopt are capable of performing the required functions.

As much as \$27 billion may be expended in incentive payments over ten years. Eligible professionals may receive as much as \$44,000 under Medicare and \$63,700 under Medicaid, and hospitals may receive millions of dollars for implementation and meaningful use of certified EHRs under both Medicare and Medicaid.

The CMS rule announced today makes final a proposed rule issued on Jan. 13, 2010. The final rule includes modifications that address stakeholder concerns while retaining the intent and structure of the incentive programs.

Page 1 of 2

Health Information Exchange



Healthcare Reform

Healthcare Reform: Where We Stand

- Reform Objectives**
- Expand Coverage to Non-Insured and Underinsured
 - Increase Information Sharing
 - Transform Care to Targeted Protocols and Outcomes

- Anticipated Tech Impact**
- Expanded Eligibility and Enrollment Systems
 - Build HIEs and Utilize EHRs
 - Utilize BI and Disease Management Toolsets

Gartner

Transformation Drivers — Program-Specific Trends

Gartner believes states will rethink how to leverage innovative technologies and Medicaid Management Information System (MMIS) capabilities to meet changing priorities.

Medicaid Information Technology Architecture (MTIA)

- Centers for Medicaid and Medicare Services (CMS) begins to demand states move toward the use of standards-based technology.
- MITA State Self-Assessment is a functional decomposition to drive home the message that “how” functions are done might vary from state to state, but “what” they do is the same.
- New MMIS certification requires MITA alignment.

HITECH: EHR Incentive Payment Program

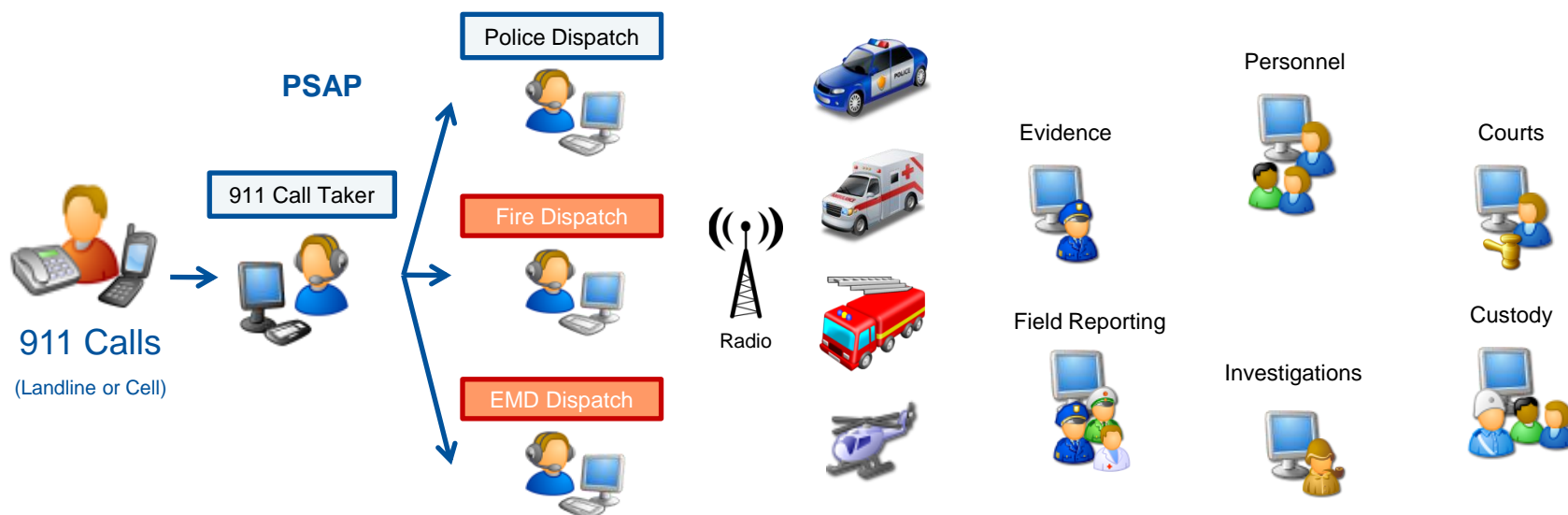
- MMIS as the incentive program payment vehicle.
- MMIS as the conduit for clinical data collection from Electronic Health Records (EHRs)
- Use of “portal-driven” architecture.
- Interoperability of messaging protocols.
- Expected to operate as the conduit for immunization data exchange with Medicaid providers and state public health Immunization Registries.

MMIS Transformation

- States’ Medicaid systems will be compatible across state boundaries.
- Service-oriented architecture and portal access provide seamless interface for providers.
- Ability to receive data from providers electronically will lower costs of paper-handling for prior authorizations and determination of medical necessity.
- MMIS will be the conduit for collection of clinical data from Electronic Health Records (EHRs)
 - Increased involvement of clinical/medical staff in health analytics and the creation of programs that improve health outcomes.
- MMIS will be the conduit for health information exchange:
 - ePrescribing
 - Immunization Registry data exchange
 - Lab data exchange.

Transformation Drivers — Program-Specific Trends

Public Safety Operational Context

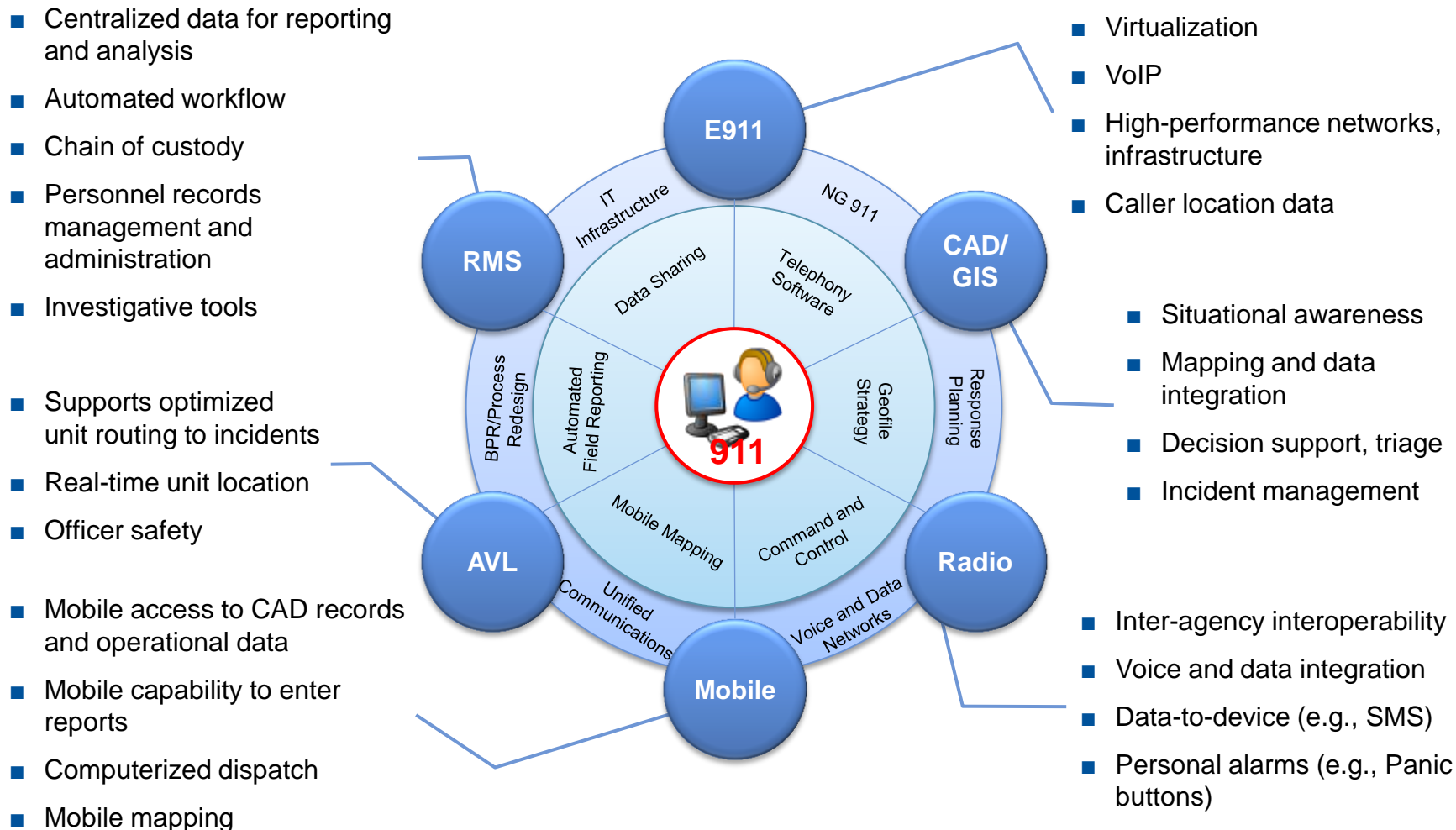


Enabling Technologies



Transformation Drivers — Program-Specific Trends

Public Safety Technologies and Infrastructure Delivering Operational Capabilities



Transformation Drivers — Program-Specific Trends

The National Accountability Agenda continues to drive IT activity at the state level, while local control puts a squeeze on IT capabilities.

National Accountability Agenda

- Setting higher standards for students
- Measuring whether they are learning
- Providing incentives in the form of rewards and punishments for schools and students to achieve



- Statewide educational data warehouse and business intelligence initiatives
- Linking educational outcomes to teacher performance and economic performance
- High-stakes (i.e., funding-related) assessments and ongoing assessments

Local Control Initiatives

- Integrate technology and instruction
- Standards-based curriculum
- Bridging the digital divide
- Improve educational outcomes



“The Squeeze”

- Broad and diverse technology solutions in place
- Virtual learning environments
- Controlled access
- Internet in the home and at school

Transformation Drivers — Program-Specific Trends

Implications for the State of Michigan

Effective response to these trends...

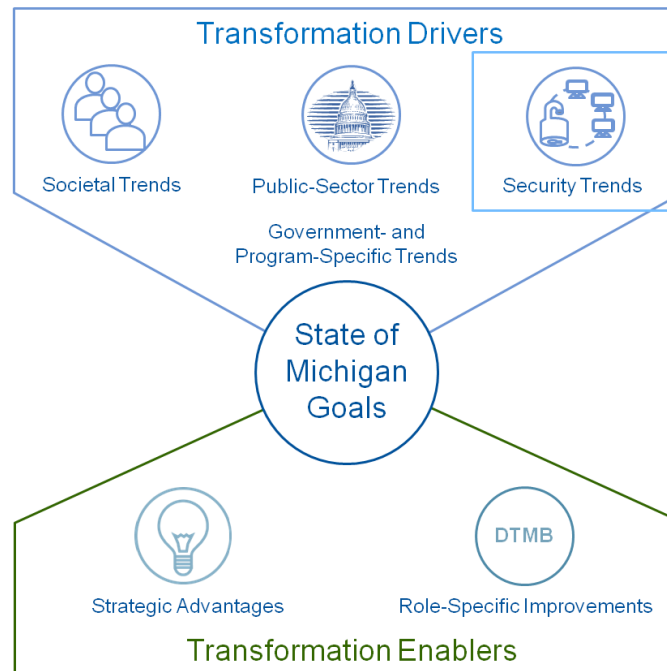
- Aging legacy systems enabling federal program (i.e., MMIS, HHS, etc.) are being replaced, and they require significant new capabilities to be sustained by the states.
- Enterprise information management capabilities are being required in all major federal program areas that are run by states — Human Services, Education and Homeland Security (public safety).
- Consumerization trends will continue to drive changes in the way that governmental agencies interact with constituents and the populations being served.
- A broad range of domain-specific technologies may be deployed by programs to achieve their domain-specific needs.

...requires DTMB initiatives that enable:

- Significantly enhanced project and program management, and vendor management capabilities to effectively manage the delivery of modern, integrated solutions.
- Enhanced enterprise information management capabilities in DTMB and in program areas and agencies.
- Aggressively driving solutions and DTMB services to more-consumer-friendly platforms for all constituents.
- Establishing standards that allow for an ever-widening array of domain-specific technologies to be deployed.

Transformation Drivers

Security Trends



Transformation Drivers — Security Trends

Internet Attacks Become More Frequent and Vicious — 2010 Statistics (Source: Symantec)

Figure 1. Average Web Attacks per Day, by Month

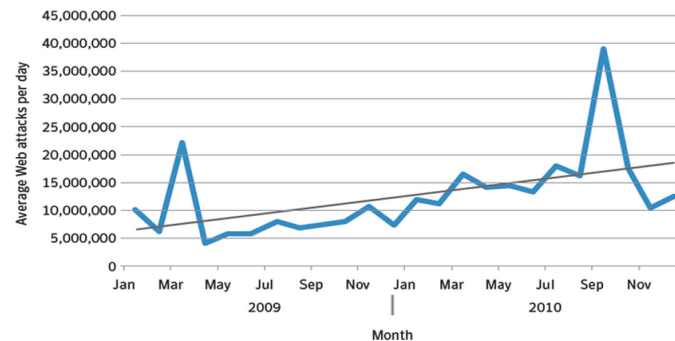
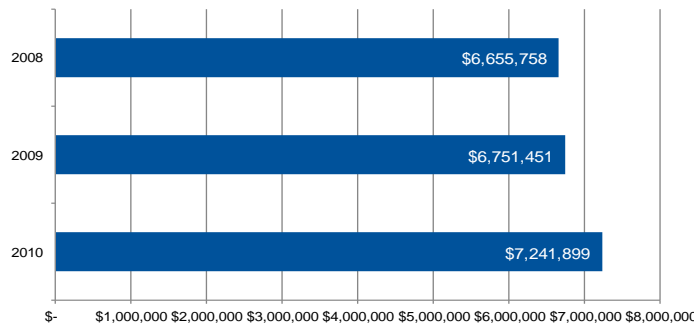


Figure 2. Average Cost of a Data Breach (2008–2010)



- 286M+ threats.
- 93% increase in Web attacks.
- An average of 260,000 identities exposed per breach.
- 42% more mobile vulnerabilities.
- 6,253 new vulnerabilities (161% increase from 2009).
- 14 new Zero-Day vulnerabilities (found in widely used applications such as Internet Explorer, Adobe Reader and Adobe Flash Player).
- \$.07 to \$100 per credit card — this was the range of prices seen advertised in the underground economy for “stolen” credit card numbers.

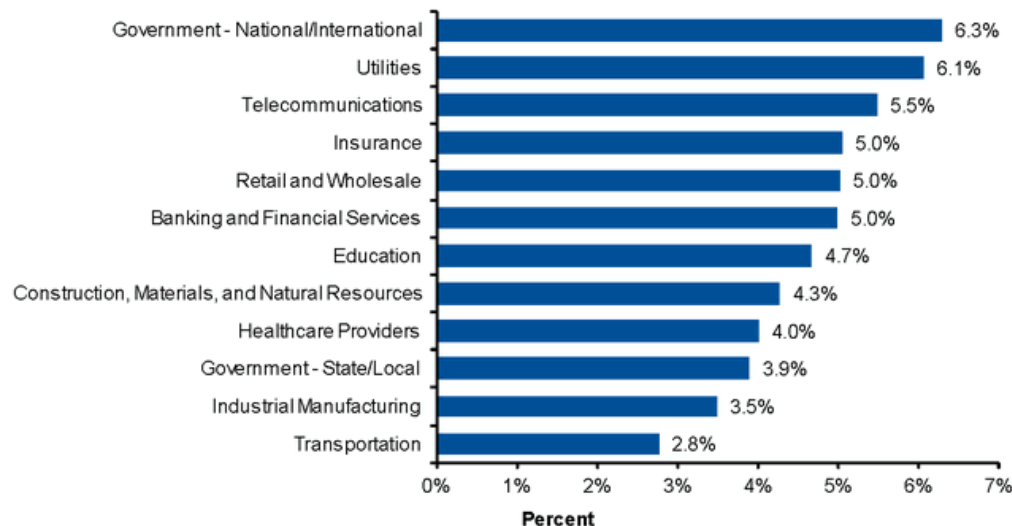
“The glory days of the lone hacker toiling away in his bedroom are a thing of the past; today’s more sophisticated intruders have organized themselves into syndicates to conduct Mission Impossible-style ‘ops’ to pilfer information from your network.” Business 2.0, January 29, 2007

Transformation Drivers — Security Trends

Internet Attacks Become More Frequent and Vicious — Impacts to State/Local Governments

- Security requirements for access, storage and transmission of sensitive data become baseline, mandatory requirements (HIPAA, PCI, CJIS, SB 1386).
- Security requirements include physical security, background checks on employees, access control, encryption, monitoring of activities and regular audits.
- Some agencies such as taxation, health/human services and law enforcement will require additional security.
- State/local governments are now spending an average of 3.9% of their IT spending on security.

Figure 3. IT Security Spending as a Percentage of IT Spending, by Industry



Transformation Drivers — Security Trends

Implications for the State of Michigan

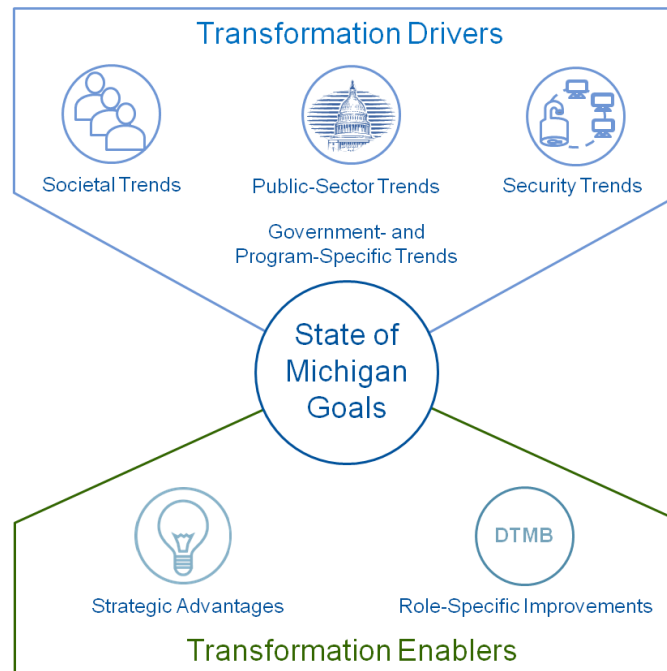
Effective response to these trends...

- Increasing frequency and viciousness of security attacks.
- Robust security requirements for access, storage and transmission of sensitive data become the minimum.
- Increasing drive for transparency, privacy and de-identification.

...requires DTMB initiatives that enable:

- Aggressive approaches required to monitor and secure systems and networks.
- Established ability to rapidly identify and mitigate new security risks.
- Ability to tailor the security mitigation to the vulnerabilities of the asset being protected.
- Established baseline security requirements across all agencies — likely to include key elements of standards such as HIPAA, PCI, etc.
- Enhanced security capabilities to meet the needs of certain government communities or assets.
- Capability to monitor and enforce compliance with standards.

Transformation Enablers

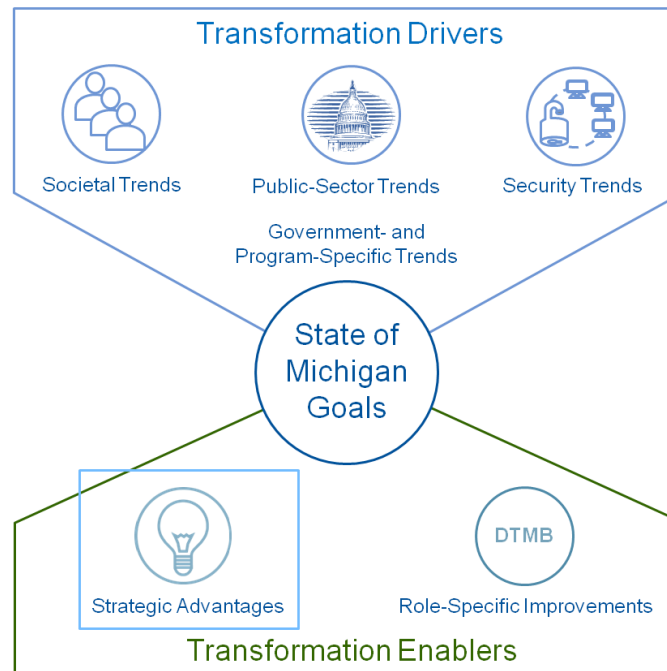


Transformation Enablers

- The following sub-sections provide an overview of internal opportunities within DTMB trends that will enable DTMB to achieve its strategic goals:
 - DTMB Strategic Advantages
 - Role-Specific Improvement Opportunities.

Transformation Enablers

Strategic Advantages



Transformation Enablers — Strategic Advantages

- DTMB is well-positioned for a transformational change because it has the ability to capitalize on several unique opportunities that will be required to enable changes in technology, organization, process, strategy and services.
 - State leadership is emphasizing IT as a business enabler...and differentiator.
 - All IT functions are already consolidated under DTMB.
 - DTMB possesses a technically proficient staff that has been recognized nationally for its innovative success.
 - Local governments are actively seeking cost-effective IT solutions and IT providers.

Transformation Enablers — Strategic Advantages

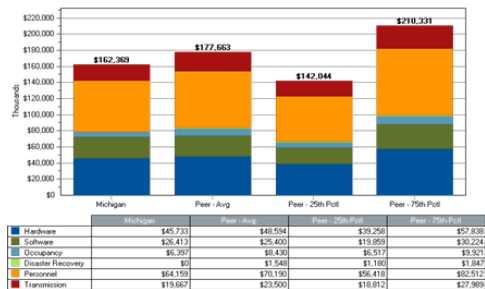
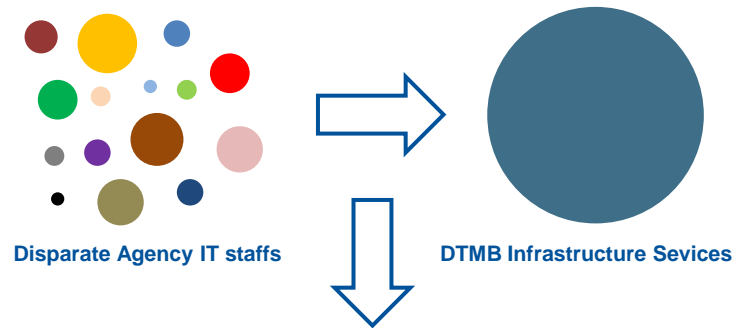
State leadership is emphasizing IT as a business enabler...and differentiator.

- **Leadership** — DTMB has the vision to make the State of Michigan ***“one of the most innovative, efficient and responsive governments in the world”*** and that vision is supported by an executive team willing to achieve this vision.
 - Governor Snyder and Director Nixon have both emphasized the importance of improving technology so that the State is able to ***“provide our citizens and businesses with the 24/7 service they have come to expect.”***
- **Increased Visibility** — DTMB is responsible for IT, budget and procurement — IT’s alignment with these control agencies provides an opportunity for the State to apply a holistic approach to improving future IT investments and streamlining IT procurement.
 - DTMB can evaluate opportunities to use procurement as a funding stream.
 - The alignment of IT and budget under the same organization provides IT with the appropriate audience to propose necessary changes to IT funding.
- **Emphasis on Transparency** — DTMB has assisted the Governor’s strategy team and all departments across the State in development of a plan of action and implementation of department-level scorecards. Each department has a scorecard that is updated monthly, with program/division-level scorecards also being developed.
 - IT will need to manage and communicate the necessary metrics to make these scorecards meaningful.
- **Improved Financial Position** — The State has taken the necessary steps to re-establish the State’s financial outlook.
 - Bloomberg is a respected leader when it comes to delivering business and financial information, news and insight around the world. Bloomberg’s Economic Evaluation of States ranked Michigan second out of all 50 states — a strong indication that Michigan is headed in the right direction.
 - Fitch Ratings announced that it revised the State of Michigan’s rating outlook for all bonds from stable to positive. Governor Snyder, Treasurer Dillon and Budget Director Nixon met with rating agencies in New York for the first time in years to share the Governor’s plan for reinvention and to discuss the fact that Michigan’s budget is now in structural balance.

Transformation Enablers — Strategic Advantages

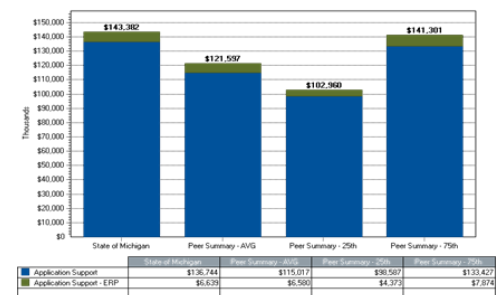
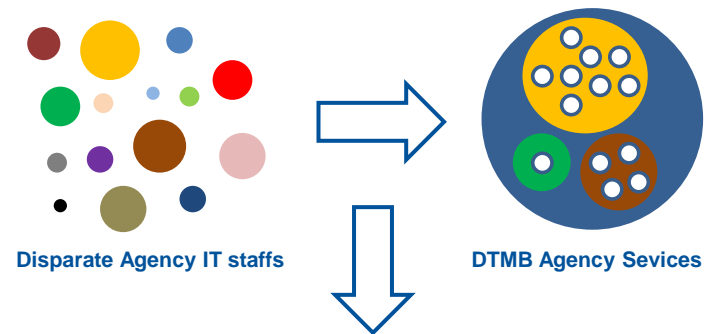
All IT functions are already consolidated under DTMB.

DTMB has centralized all IT infrastructure support operations under Infrastructure Services.



DTMB has reaped the benefits of I&O consolidation, because the benchmark shows that DTMB's I&O support spending is better than its peer average.

DTMB has aggregated application development and support under Agency Services and has grouped agencies under Information Officers (IOs).



DTMB has an opportunity to achieve similar efficiencies in application support, because the benchmark shows that DTMB spends more on application support than the 75th percentile.

Transformation Enablers — Strategic Advantages

DTMB has a technically proficient staff that has been recognized nationally for innovation.

- The Job Skills Inventory shows that DTMB has a higher percentage of staff with proficiency at the Advanced and Master level than its public or private peers.

Industry Benchmark Skill Proficiency Comparison
% of Skills at Each Proficiency Level

	Limited	Basic	Intermediate	Advanced	Master
DTMB	6%	19%	37%	31%	7%
Public	8%	23%	35%	29%	6%
Private	7%	23%	38%	28%	5%

- The Jobs Skills Inventory also shows that DTMB has bench strength (individuals with skills but not in that job function).
 - DTMB has the opportunity to place some of these these skilled individuals into roles that require these skills.

Highly Qualified and Qualified FTEs currently in Different Job Families

Job Family	High Qualified	Qualified	Total
Application Development	43	122	165
Architecture	21	71	92
Business Analysis	37	123	160
Business Continuance	11	50	61
Business Intelligence	29	81	110
Client Technology / Desktop Support	67	144	211
Computer Operations	34	125	159
Customer Support / Help Desk	42	132	174
Database Administration	22	64	86
Database Analysis	44	65	109
IT Leadership	17	66	83
IT Security	20	79	99
Network Management	13	62	75
Project Management	25	87	112
Quality Assurance	49	93	142
Relationship Management	15	48	63
Release Management	23	79	102
Systems Administration	48	107	155
TeleCommunications	22	71	93
Web Administration	25	51	76
Web Design	30	84	114



The State of Michigan won five (5) awards, more than any other state, at this year's annual conference of the National Association of Chief Information Officers (NASCIO).

2011 Awards

- Data, Information and Knowledge Management — [Department of Human Services Decision Support System](#)
- Digital Government: Government to Business — [USAHerds Cattle Tracking Protecting our Food Supply](#)
- Enterprise IT Management Initiatives — [Optimizing Government Technology Value: Establishing Enterprise Metrics to Ensure Operational Readiness and Business Availability](#)
- Fast Track Solutions — [MiCloud Automated Hosting Service](#)
- Information Communication Technology (ICT) Innovations — [Michigan Building Intelligence System](#)

Transformation Enablers — Strategic Advantages

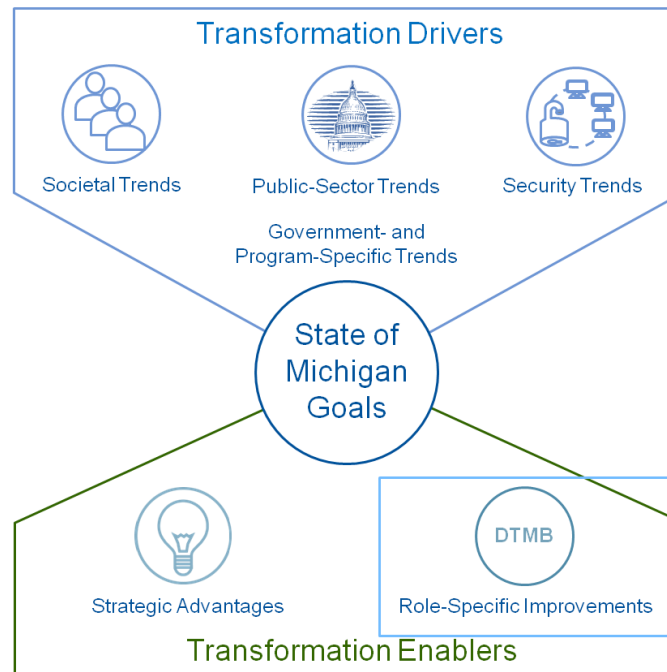
Local governments are actively seeking cost-effective IT solutions and IT providers.

- A new National Association of Counties (NACo) surveys shows that counties large and small appear to be settling into the “new normal” of revenue, staffing and service delivery levels after years of revenue losses in a U.S. economy struggling toward recovery.
- In early October, NACo surveyed all counties that have professional managers, clerks or administrators. Of these 2,000 counties, 233 responded, representing 38 states. Counties of varying budget sizes responded, providing a good representative distribution of counties in the nation by population. Key findings include the following:
 - Only 35% of responding counties report that they adopted balanced budgets this fiscal year, with no anticipated shortfalls.
 - More than one-half of responding counties report that declining revenue from the state and federal government was the number one contributor to their shortfalls.
 - Two-thirds of responding counties report employing fewer county employees this fiscal year as compared to the number of county employees in FY2010.
- During interviews with localities, counties and cities expressed an openness to partnering with the state for IT services, as long as they are cost-competitive and they are included in the requirements definition.



Transformation Enablers

Role-Specific Improvement Opportunities



Transformation Enablers — Role-Specific Opportunities

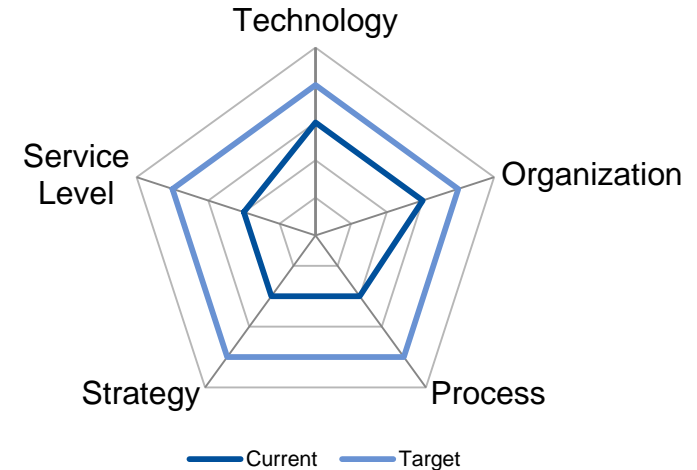
- Nine IT roles across five unique perspectives were used to yield a comprehensive assessment of the IT environment at DTMB. The following slides describe improvement opportunities for each of the nine roles.



Transformation Enablers — Role-Specific Opportunities

CIO: Business Alignment and Effectiveness Opportunities

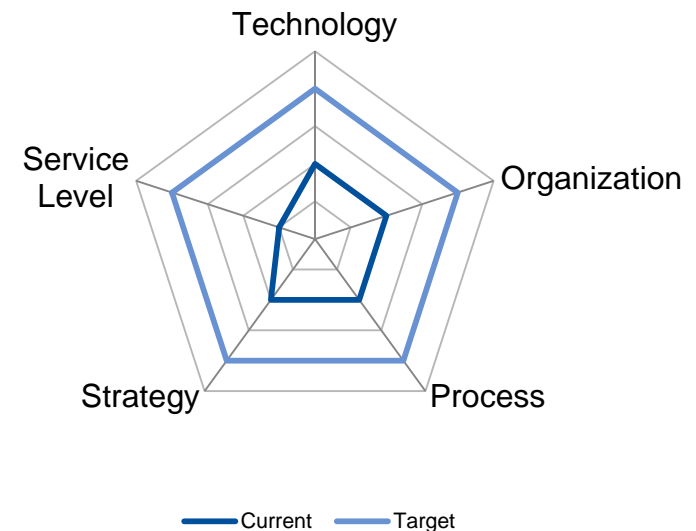
- **Position the IO as a Strategic Partner** — DTMB should clarify the role and responsibility of an IO to the agencies, and emphasize the IO's strategic planning capabilities.
- **Address Agency Perception of DTMB's Business Value** — DTMB should identify a service portfolio owner who is responsible for defining a service portfolio that communicates the business value of its services to the customer agencies.
- **Establish Business Analyst Expectations** — DTMB should require agencies to supply business analysts or explore offering the business analyst function as a service to agencies.
- **Improve Customer Service Satisfaction** — DTMB should clearly establish and communicate service-level agreements with agencies and provide periodic performance reports.
- **Engage Local Governments** — DTMB must formalize a process and a role in the organization to more effectively engage local governments.



Transformation Enablers — Role-Specific Opportunities

CIO: Operations Management Opportunities

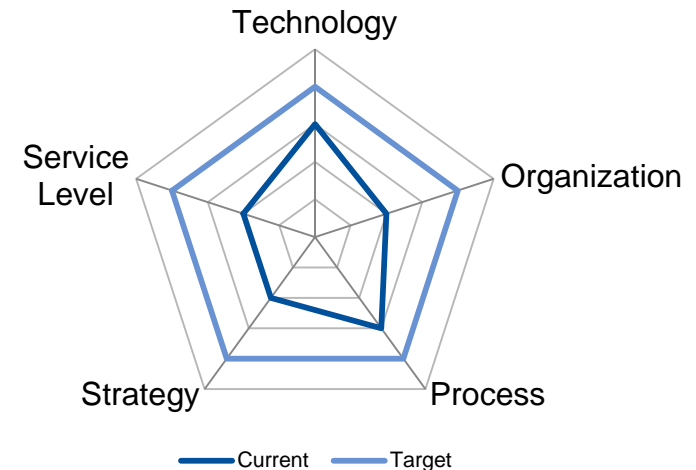
- **Operationalize the Strategic Plan** — DTMB must estimate the costs for strategic projects and work with the Budget Office to prioritize and fund these initiatives. These initiatives must be incorporated into an annual DTMB Operational Plan. DTMB will not be able to fulfill its strategic objectives if it remains solely reliant on agency-allocated funds.
- **Clarify Services to Customer Agencies** — DTMB should formalize a service portfolio and service portfolio owner. DTMB must define services in terms that communicate the business value to its customers and assign service managers to those services.
- **Explore Different Financial Management Practices (e.g., activity-based costing)** — IOs will work with each agency to determine the appropriate IT services, and prioritize IT projects given their available IT budgets.
- **Establish Internal Governance** — Define internal accountability (e.g., accountability between Information Officers, Service Managers, Project Managers and Infrastructure Services).
- **Optimize Resources** — Evaluate specific roles in Agency Services that could be pooled across agencies in order to achieve economies of scale and enforce consistency.



Transformation Enablers — Role-Specific Opportunities

Applications Opportunities

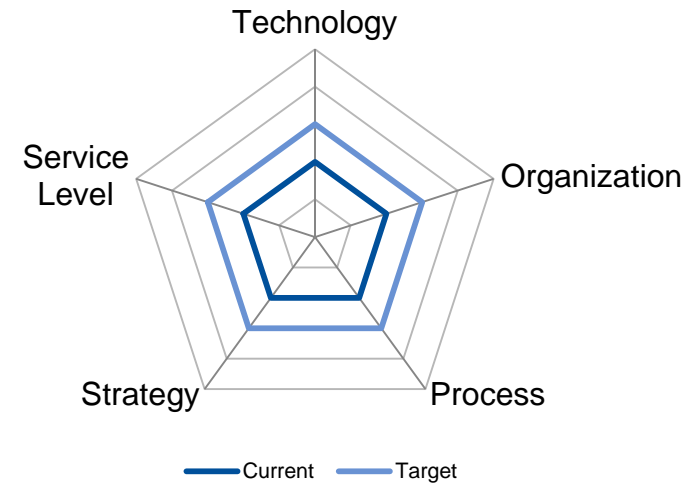
- **Strengthen Application Portfolio Management —** Application Portfolio Management should be expanded to become one of the primary drivers of the applications organization, because it will inform future applications investment decisions (e.g., tolerate, invest, migrate or eliminate applications).
- **Reinforce SUITE Methodology —** Improvements should be made to SUITE for better explanations of quality expectations, as well as the education and standardization of SUITE across all application development and support teams.
- **Standardize Project Status Reporting —** Customer satisfaction will improve with consistent on-time and on-budget reporting of project status, leading to better project execution.
- **Become More Business Architecture-Driven —** Application development and maintenance work should become more Business/Solution Architecture-driven with a full Enterprise Architecture view of the organization, and less driven by the influence of the agencies.
- **Leverage the Tools DTMB Already Owns —** Expand usage of ChangePoint for application portfolio management, as well as individual project timeline and budget reporting.



Transformation Enablers — Role-Specific Opportunities

Program and Portfolio Management Opportunities

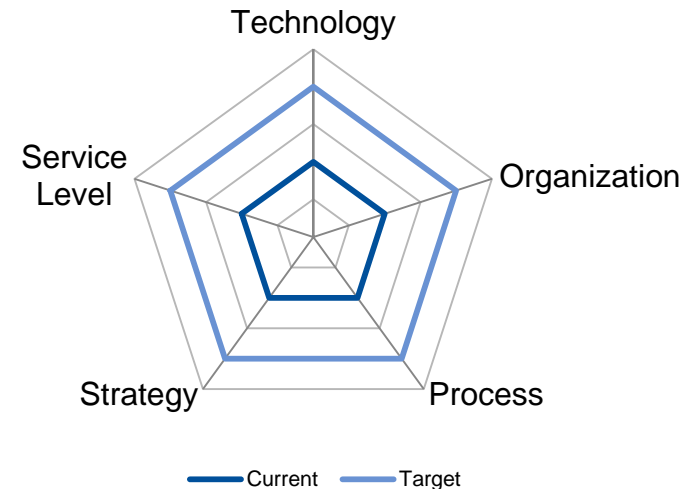
- **Institutionalize an Enterprisewide Reporting Tool —**
ChangePoint has been selected as the enterprisewide project management tool, but all business units must consistently use the tool to effectively capture and report project information. Likewise, disparate project management tools should integrate with ChangePoint.
- **Standardize Project Management Processes —**
Standardization needs to occur around project management processes (e.g., SUITE) — such processes include transparent reporting of project metrics, an ROI/benefits realization review, and accountability for meeting projects on-time and on-budget.
- **Align Organizational Reporting and Governance Structure —** The ePMO must perform an executive-level function, and have increased governance and oversight over Agency Services PMOs.
- **Increase Skill and Training for Project Management Roles —** DTMB must define required PMO skill sets and hire an appropriate number of skilled project managers.
- **Establish Agency IT Strategic Planning Processes That Are Separate From the Call for Projects —** The Call for Projects process should be focused on enterprise portfolio management, and should be less focused on IT strategic management.



Transformation Enablers — Role-Specific Opportunities

Business Intelligence and Performance Management Opportunities

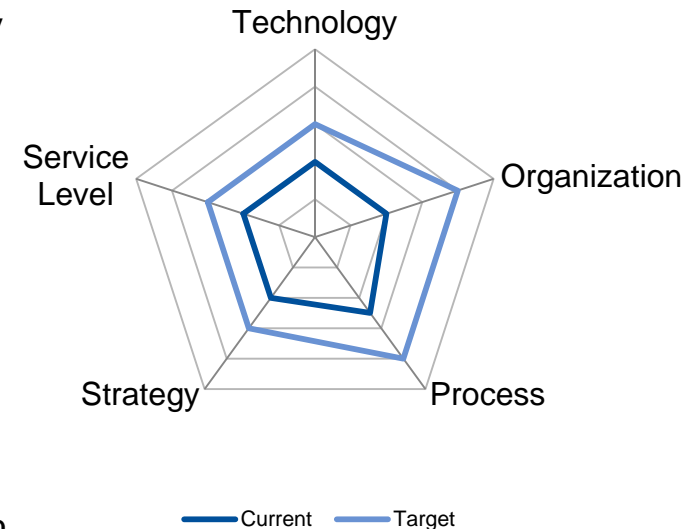
- **Implement Predictive Analytics** — The more mature agencies would like to work toward a true predictive analytics capability with a relook at all the data being generated across the enterprise, to ensure that all the appropriate data are being loaded into the data warehouse from all the appropriate source systems.
- **Build Enterprise Information Management (EIM) Capability** — Robust data governance and enterprise information management need to become the foundation for all performance management, predictive analytics and management reporting capabilities via Enterprise Architecture.
- **Centralize Governance of BI/PM Activities** — A centralized business intelligence and performance management organization should be established that would own all performance management, business intelligence, predictive analytics, enterprise information management and master data management activities.
- **Standardize Data Management Processes** — Formalized, standardized processes around data quality, data cleansing and master data management need to be implemented on a cross-agency, enterprisewide basis.
- **Enable Citizen-Centric Government** — Each of the above items must be implemented in order to enable the MiPage citizen-centric government strategic objective.



Transformation Enablers — Role-Specific Opportunities

Enterprise Architecture Opportunities

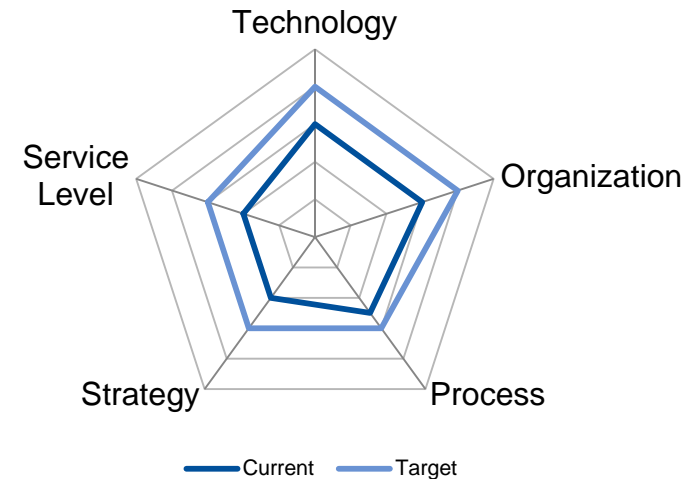
- **Realign EA** — Realign EA function by having it report directly to the CIO or separate CTO function; increase staffing levels and involvement in planning activities.
- **Establish Solution Architects** — Staff applications and solution architects in Agency Services to help guide solution design and standards management.
- **Increase Scope of EA Coverage** — Increase scope of EA coverage to include comprehensive data/information architecture, integration architecture and business architecture.
- **Align With Industry Best Practices** — Align the EA program to a standard industry EA methodology or EA framework.
- **Improve Communications** — Improve communications from EA to stakeholders that provides EA value, metrics, compliance reasoning and EA events. Communicate/market success stories to customers.
- **Continue to Innovate** — Re-instantiate the process to proactively incorporate new standards and products for innovation/new trends.



Transformation Enablers — Role-Specific Opportunities

Infrastructure and Operations Opportunities

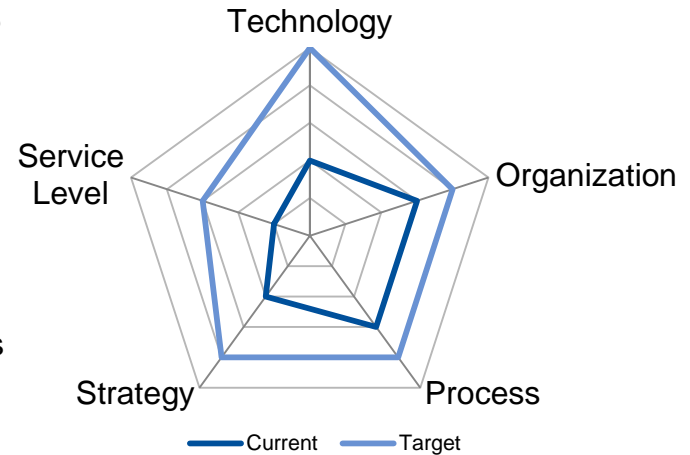
- **Implement Automated IT Operational Tools** — Need for improved integration and automation of IT tools and processes, especially for customer-facing processes.
- **Consolidate IT Service Catalogs** — Single IT Infrastructure Service Product Manager who is responsible for providing all IS services through one Service Catalog to the agencies.
- **Improve IT Process Maturity** — Adoption of a comprehensive IT Service Management road map across all major IT processes that includes integrating existing processes while incorporating new processes (capacity management, performance management).
- **Measure Customer Satisfaction** — Conduct regular customer satisfaction surveys to identify areas of strengths and areas of improvements based on feedback.
- **Improve Customer Metrics** — Update metrics measurement and reporting process to provide metrics that are useful to customer agencies and incorporate metrics performance improvement plan.
- **Enhance Infrastructure Financial Management** — Improve financial management process by conducting regular benchmarks, improve invoicing, and incorporate cost allocation showbacks for service rates.



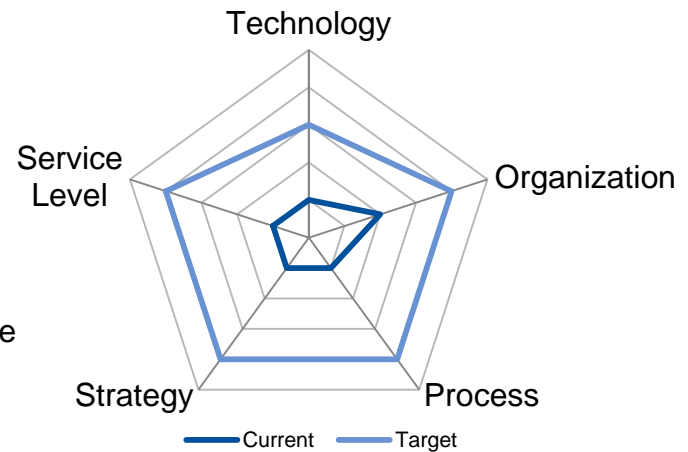
Transformation Enablers — Role-Specific Opportunities

IT Sourcing and Vendor Management Opportunities

- **Establish and Communicate Standard Processes** — Develop a Procurement Manual and Contract Management Guide. Develop clear policy related to delegation of authority that allows procurement to focus on strategic, high-commonality, high-impact procurement opportunities, and allow agencies to drive agency-specific, requirements-driven solicitations.
- **Align Organization** — Complete organizational assessment to establish future operating model, including establishing job skills, position descriptions and addressing short-term operational gaps identified in the organizational analysis. This process should more closely align purchasing and procurement functions and establish a vendor and contract management practice.
- **Re-evaluate Current Procurement Vehicles** — Establish a short-term strategy to allow for more-accurate spend analysis with current tools. Review existing aggregated commodity IT contract for opportunities to lower pricing through negotiation, through utilizing existing commodity contracts available to Michigan, or through a series of procurement initiatives.
- **Enable Automation** — Develop a gap analysis of existing processes to use as a component of future e-procurement implementation decisions. Develop business case and alternative funding assessment as necessary to deploy an e-procurement system. Consider implementing contract and vendor management tools as part of the deployment.



Sourcing

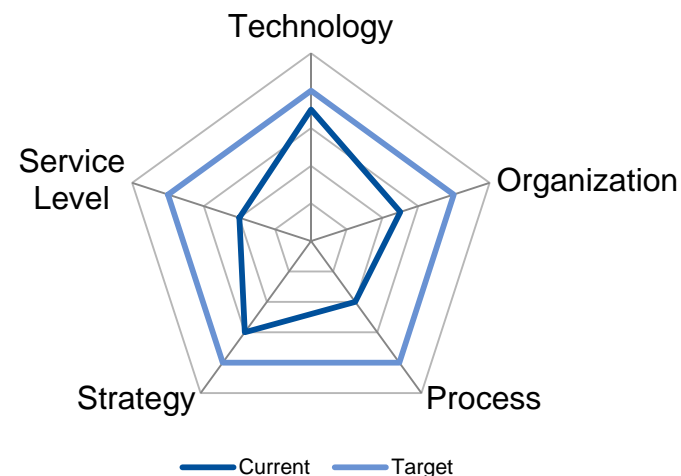


Vendor Management

Transformation Enablers — Role-Specific Opportunities

Security and Risk Management Opportunities

- **Conduct a Comprehensive Risk Assessment** — Conduct a comprehensive security risk assessment of the State's environment that identifies the realistic threats facing the State and the gaps the State needs to plug to remediate the threats.
- **Increase Scope of Vulnerability Management** — Perform vulnerability scanning and compliance across all areas of IT infrastructure to include servers, network devices, desktops and mobile platforms.
- **Improve Security Operations Center (SOC) Operations** — Stand up a true 24/7 SOC function with proactive monitoring skills.
- **Address Vendor Risk** — Increase scope of risk management activities to cover procurement and vendor management activities.
- **Incorporate Privacy Management** — Incorporate privacy management activities and assign a State privacy management owner.
- **Enhance Data Security** — Incorporate data management and data loss prevention activities into the security and Enterprise Architecture disciplines.
- **Conduct Security Training** — Provide training programs to help improve effectiveness of security operations staff to help make operations more proactive in nature.



IT Service Delivery

In Order to Become the IT Provider of Choice for Agencies and Other Government Entities, DTMB Must Radically Change How It Delivers IT Services

- There are many elements in the current environment that provide opportunities for transforming DTMB's ICT services:
 - Societal trends
 - Trends in public-sector and government program areas
 - Security trends
- There are a host of areas for DTMB to improve, based on the Gartner assessment of:
 - CIO: Business Alignment and Effectiveness
 - CIO: Operations Management
 - Applications
 - Program and Portfolio Management
 - Business Intelligence and Performance Management
 - Enterprise Architecture
 - Infrastructure and Operations
 - IT Sourcing and Vendor Management
 - Security and Risk Management

DTMB must radically rethink its IT delivery model to address the gaps identified, and leverage the forces of change in the current environment and become the “IT Provider of Choice (not mandate).”

Strategic Advantages provide a strong foundation for the future capabilities.

IT Delivery Model Maturity

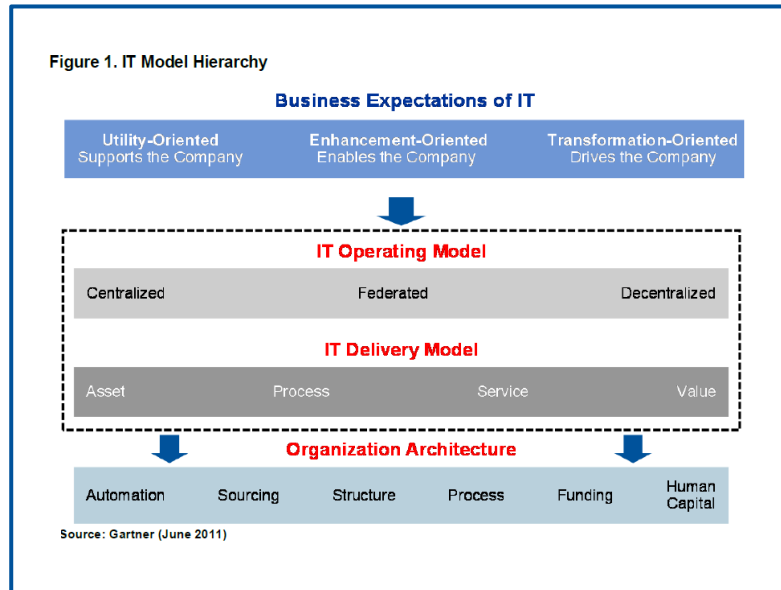
“Ultimately, the manner in which an IT organization optimizes service management is based on its choice of IT delivery model. IT delivery models are specific organizational constructs aligned to distinct IT service management roles and value propositions. Which one is the right model depends on the enterprise’s expectations of IT in relation to IT’s service delivery capability and maturity.”

*Colleen M. Young
VP and Distinguished Analyst, Gartner Research*

A Note About Shared Services

- The State has expressed a desire to offer selected IT services (i.e., shared services) to other governmental entities, and has established a Shared Services [office] to facilitate these efforts.
- Gartner believes that sustained success with these efforts will require substantial change on the part of the State of Michigan, including but not limited to:
 - Demonstrated low-cost, high-quality provisioning of selected IT services
 - Consistent IT service metrics
 - Service level management processes that provide guaranteed provisioning and penalties for non-performance
 - Memoranda of understanding (MOU) or other inter-jurisdictional agreements.
- Offering shared services to other government entities may offer mutual benefits for the State, DTMB and other government entities. It must be part of a larger IT service delivery model strategy in order to avoid potential pitfalls and risks.
- The following pages, in their discussion of IT delivery models, include comments about shared service offerings of this nature.

IT Delivery Model Hierarchy and Overview



- IT operating models are the result of certain implicit governance decisions that define and bind the IT spheres of influence. They help determine:
 - Where responsibility and authority for delivering different types of IT value will reside
 - How the tradeoffs between monopolistic economies of scale and entrepreneurial flexibility will be balanced within the enterprise.
- A delivery model defines the way in which a specific IT organization orchestrates its capabilities to deliver against its core value proposition.
 - Four basic IT Delivery models are Asset-, Process-, Service-, and Value-optimizing models
- The IT organizational architecture describes the way the IT capabilities and resources are orchestrated to deliver expected benefits. The following factors change, depending on the delivery model being followed:
 - Funding mechanisms
 - Organizational structure
 - Process design
 - Strategic sourcing
 - Human capital requirements and management conventions
 - Tools and automation.

Organizational Architecture Depends on The IT Delivery Model Approach

IT Delivery Model Optimizing Approach

	Asset	Process	Service	Value
Funding	Fixed annual IT budget; no chargeback or chargeback based on high-level allocation	Fixed annual IT budget and chargeback allocation for infrastructure; possibly zero-sum budgeting and chargeback for projects	Cost or market-based fee for service; zero-sum budgeting	Market-based fee for service; profit/loss-based budget with discretionary revenue stream
Organizational Structure	Functional or technical silos	Process/function matrix with functional silos dominating	Process/function matrix with multidisciplinary process teams dominating; some competency centers staffed as internal consultancies	IT business matrix around core business process or value centers
Process Design	None	Compliance to “standard” (generally ITIL, possibly also combined with elements of CMMI, COBIT and Six Sigma)	Process improvements correlated to required service outcomes; outcomes measured in relation to IT service-level agreements	IT process improvements correlated to business processes; outcomes measured in business process or business outcome terms

Source: Gartner 2011

Organizational Architecture Depends on The IT Delivery Model Approach (Continued)

IT Delivery Model Optimizing Approach

	Asset	Process	Service	Value
Human Capital	Technical expertise	Process expertise	Solution, relationship and business expertise	Business expertise and innovation expertise
Sourcing		Most internal; some external staff augmentation	Most internal; some selective outsourcing based on “commodity” services	Strategic multi-sourcing based on explicit competitiveness of internal capabilities
Tools/ Automation	Opportunistic device monitoring, help desk “ticketing” tools	“ERP” for IT	“CRM” for IT	IT back office “off the shelf”; significant internal development for retained competitive advantage

Source: Gartner 2011

Which IT Delivery Model May Work Best for Michigan?

IT Delivery Model Assessment — Asset Model

Advantages

- Maintains internal cost structure as status quo.
- Can facilitate development of deep technical expertise.

Disadvantages

- Does not enable DTMB the flexibility to fund enterprisewide initiatives without program-specific sponsorship.
- Does not facilitate strategic alignment of IT and agency priorities.
- Organization structure does not facilitate collaboration, sharing and reuse of IT assets.
- Lack of process design leads to ad hoc, inconsistent service delivery.
- May not take advantage of potential cost-savings opportunities in procurement and contract management.
- Few tools to enable effective IT service delivery.

Bottom Line

- Does not position DTMB for improved customer service or business alignment.

Which IT Delivery Model May Work Best for Michigan?

IT Delivery Model Assessment — Process Model

Advantages

- Maintains internal cost structure as status quo.
- Can lead to more-effective cost management.
- Enables business to view costs of IT services (via chargeback).
- Can improve IT process consistency.
- Enables DTMB to focus on non-commodity such as IT services.
- Can facilitate development of deep process expertise.
- Establishes groundwork for service level management.

Disadvantages

- Does not enable enterprisewide planning and architecture.
- May not enable alignment of IT budget with strategic organization needs.
- Process functional silos continue to inhibit collaboration, sharing and reuse.
- Service level management may focus on less-than-useful business metrics.
- Limited, tactical use of sourcing options to obtain desired skills and capabilities.

Bottom Line

- Provides necessary, but not sufficient, movement to improve customer services.
- Lack of collaboration, sharing and reuse continues to position MI as a high cost provider of IT solutions

Which IT Delivery Model May Work Best for Michigan?

IT Delivery Model Assessment — Service Model

Advantages

- Provides sufficient cost structure to position DTMB as a cost-effective IT provider.
- Provides DTMB organizational capability to build deep capacity in relevant skill areas (such as BI or business analysis).
- Process improvements are tied to key service areas, and are in areas valued by customers.
- Enables improved solution, relationship management and business expertise to proactively advise customers.
- Leverages sourcing arrangements to reflect organizational strengths and strategic competency needs.
- Is a stepping stone to adopting value-focused IT delivery model.

Disadvantages

- Strategic sourcing may create tension with respect to the value of the State's IT employees.
- DTMB may not have the IT financial management expertise needed for more-effective cost management of IT solutions and delivery.
- Initial low service performance may result in public awareness issues.
- Achieving aggressive goals may require an extensive amount of time.

Bottom Line

- Enables DTMB to significantly improve its ability to meet customer needs.
- Positions DTMB as a cost-effective, high-quality IT provider, even in comparison to external service providers.
- Enables DTMB to strategically reduce its cost of service.

Which IT Delivery Model May Work Best for Michigan?

IT Delivery Model Assessment — Value Model

Advantages

- Is consistent with DTMB's desire to provide IT services to other governmental entities.
- Enables DTMB to have external funding for strategic IT investments.
- Provides improved value to the State by offering selected services to local governmental entities that cannot provide or afford the service.
- Potential for economic development.

Disadvantages

- Will be a challenge to achieve, given that DTMB is not yet using a service-focused IT delivery model.
- Establishing a profit-based entity may create legislative issues.
- Establishing effective governance models will be key.
- If not implemented quickly to generate significant benefits early, may be dismantled before value is proven.

Bottom Line

- Best model to enable DTMB to achieve goal of providing IT services to other governmental entities, but most-challenging to achieve.

Scenarios Provide Diverging Ways To Achieve Strategic Goals

- The scenarios below describe options for DTMB to pursue to achieve its goal for being preferred provider of IT services
- In the following pages, the advantages and risks associated with these scenarios are used to compare them

Transformation Scenario	High-Level Description
#1: Continue with current IT Service Delivery Model	■ Implement recommended IT initiatives without seeking to explicitly change the overall IT service delivery model
#2: Transition to Service-optimizing, then Value-optimizing IT Delivery Framework	■ Explicitly change to a different IT delivery model by changing some of the underlying aspects — factors which define the IT organization architecture
#3: Radical Cost Reduction — Transition to permanently lower cost IT structure	■ Explicitly seek to significantly reduce IT costs, arriving at a permanently lower cost structure

Scenario 1: Continue with Current IT Service Delivery Model



- Existing IT service delivery model is a combination of Asset-Optimizing and Process-Optimizing approach
- Current IT Service Delivery approach is not viable for longer term alignment with business
 - Enterprise and agency leadership attitudes have matured to expect more value from IT, and expect IT to support and enable business direction
 - It is incompatible with strategic goal to deploy enterprise technologies, such as cloud computing and shared services offerings to other entities

IT Delivery Model	Potential Fit	Potential Impact
Asset Optimizing	<input type="checkbox"/>	<ul style="list-style-type: none"> ■ Does not position DTMB for improved customer service or business alignment. ■ Fully centralized model focuses on strict adherence to standards and off-the-shelf solutions ■ Does not enable flexibility to meet agency-specific needs
Process Optimizing	<input type="checkbox"/>	<ul style="list-style-type: none"> ■ Provides necessary, but not sufficient, movement to improve customer services. ■ Lack of collaboration, sharing and reuse continues to position MI at the high end for IT solution delivery.



Scenario 1 Risk Assessment: Retain Current IT Delivery Model

Potential Risk	Impact	Potential Mitigation Strategies
Does not lead to significant improvements in IT service delivery	H	<ul style="list-style-type: none"> ■ Set expectations with stakeholders for limited IT improvements
Financial benefits not realized	H	<ul style="list-style-type: none"> ■ Establish baseline business case, and designate an owner for each initiative to ensure that benefits are captured. ■ Monitor and track benefits. ■ Establish oversight to ensure milestone achievement. ■ Ensure risk management program is in place to continuously identify and address risks. ■ Engage assistance in contract renegotiation to achieve hard-dollar benefits.
Agency-specific investments will continue, and will increasingly diverge from planned standards	H	<ul style="list-style-type: none"> ■ Maintain some standardization thru control of procurement and budgeting processes

Scenario 2: Transition to Service-Optimizing Then Value Optimizing Model

Good Potential Fit = 
Limited Potential Fit = 

- Service– or Value- optimizing service delivery models have underlying characteristics that are consistent with DTMB strategic direction
 - Are consistent with business need for IT to support and enable strategic business direction
 - Enables IT organization to structure funding sources, organization, services, processes, sourcing, and people practices to meet business expectations
- Value-optimizing model is a longer term goal, and one that cannot be achieved without first adopting a service-optimizing model

IT Delivery Model	Potential Fit	Potential Impact
Service Optimizing		<ul style="list-style-type: none">■ Enables DTMB to significantly improve its ability to meet customer needs.■ Positions DTMB as a cost-effective, high-quality IT provider, even in comparison to external service providers.■ Enables DTMB to strategically reduce its cost of service.
Value Optimizing		<ul style="list-style-type: none">■ Best model to enable DTMB to achieve goal of providing IT services to other governmental entities, but most-challenging to achieve.

Scenario 2 Risk Assessment: Transition to Service-Optimizing Then Value Optimizing

L = Low
M = Medium
H = High

Potential Risk	Impact	Potential Mitigation Strategies
Radical change creates chaos in DTMB organization	H	<ul style="list-style-type: none"> Start with proof-of-concept efforts, iterative approach. Establish and execute communications plan to provide ongoing information exchange with DTMB employees, agency customers and leadership, and other stakeholders.
High level of resistance from bargaining units to organizational change	H	<ul style="list-style-type: none"> Clearly identify benefits of change, and potential points of resistance. Tailor messages and communications to unionized workers and other affected work groups.
Financial benefits not realized	H	<ul style="list-style-type: none"> Establish baseline business case, and designate an owner for each initiative to ensure that benefits are captured. Monitor and track benefits. Establish oversight to ensure milestone achievement. Ensure risk management program is in place to continuously identify and address risks. Engage assistance in contract renegotiation to achieve hard-dollar benefits.
Leadership change affects priority of transformation program	M	<ul style="list-style-type: none"> Ensure that organization (State of Michigan) sponsorship is in place at all levels. Ensure that the communications plan addresses sponsors as well as DTMB staff. Gain support of agency leadership.
Legislation required to implement changes	M	<ul style="list-style-type: none"> If needed, utilize executive orders to legislate significant changes needed.

Scenario 3: Radical Cost Reduction

- Most popular execution strategies for achieving radical cost reduction are based on asset-optimizing approaches.

Consideration	Potential Impact
Centralization	<ul style="list-style-type: none">■ Centralized IT Management approach is required
Alternative Delivery Models	<ul style="list-style-type: none">■ Cloud computing/SaaS solutions may be needed to jump-start cost saving models■ Outsourcing and off-shoring skills acquisition and consistency of service will be needed
Off-the shelf, standard solutions	<ul style="list-style-type: none">■ Strict adherence to those solutions that provide significant efficiency gains, minimize technical diversity■ Offer only services where the benefits exceed the costs
Governance	<ul style="list-style-type: none">■ Difficult decisions on legacy solutions<ul style="list-style-type: none">– What is “good enough” functionality rather than modified solutions– What systems can be retired?■ Increase maturity of IT demand management practices -- Learn to say “No”
Other factors	<ul style="list-style-type: none">■ Seek and achieve extraordinary staff productivity■ Use automation wherever possible, providing tools to complete work■ Implement agile development techniques■ Focus rigorously on streamlining IT processes, increased process and technology standardization, and continuous improvement approaches

Scenario 3 Risk Assessment: Radically Reduce IT Costs

Potential Risk	Impact	Potential Mitigation Strategies
Outsourcing seen as a threat to employees	H	<ul style="list-style-type: none"> ■ Develop and articulate a clear sourcing strategy; communicate widely to the organization ■ Develop contracts that provide limited guarantee of employment to selected employees (e.g. San Diego County)
High level of resistance from bargaining units to organization change	H	<ul style="list-style-type: none"> ■ Clearly identify benefits of change, and potential points of resistance ■ Tailor messages and communications to impacted audiences
Financial benefits not realized	H	<ul style="list-style-type: none"> ■ Establish baseline business case, and designate an owner for each initiative to ensure that benefits are captured ■ Monitor and track benefits ■ Establish oversight to ensure milestone achievement ■ Ensure risk management program is in place to continuously identify and address risks ■ Engage assistance in contract renegotiation to achieve hard dollar benefits
Leadership change affects priority of transformation program	M	<ul style="list-style-type: none"> ■ Ensure that organization (State of MI) sponsorship is in place at all levels ■ Ensure that communications plan addresses sponsors as well as DTMB staff ■ Gain support of agency leadership
Legislation required to implement changes	M	<ul style="list-style-type: none"> ■ If needed, utilize executive orders to legislate significant changes needed to engage
Lack of operational consistency and standards	H	<ul style="list-style-type: none"> ■ Recognize that process and technical standardization must be in place in order for this to be successful ■ Leverage available cloud solutions to provide standard processes and technologies where available

Scenario 3 Risk Assessment: Radically Reduce IT Costs (Continued)

Potential Risk	Impact	Potential Mitigation Strategies
Historical under-investment in IT leads to further sub-optimal decisions	H	<ul style="list-style-type: none"> ■ Identify mission-critical services and solution areas that require additional investment ■ Identify and implement cost savings approaches that provide funding for mission-critical investment areas
Inability to meet agency-specific demands	H	<ul style="list-style-type: none"> ■ Expand enterprise architecture function to implement a more proactive role, since many agencies will still have separate funding ■ Rely heavily on institutionally combined processes for procurement, budgeting, and IT financial management to help maintain standardization and reduce technical diversity ■ Ensure communications plan identifies the benefits for each of the impacted stakeholders.

Scenario Comparison

- DTMB will have to decide which transformation scenario is most appropriate and this decision will drive the recommendations and road map for the future....

Transformation Scenario	High-Level Description	Comparison
#1: Continue with current IT Service Delivery Model	■ Implement recommended IT initiatives without seeking to explicitly change the overall IT service delivery model	Not Viable
#2: Transition to Service-optimizing, then Value-optimizing IT Delivery Framework	■ Explicitly change to a different IT delivery model by changing some of the underlying aspects – factors which define the IT organization architecture	Viable
#3: Radical Cost Reduction — Transition to permanently lower cost IT structure	■ Explicitly seek to significantly reduce IT costs, arriving at a permanently lower cost structure	Viable

NOTE: The scenarios are numbered, not ranked

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